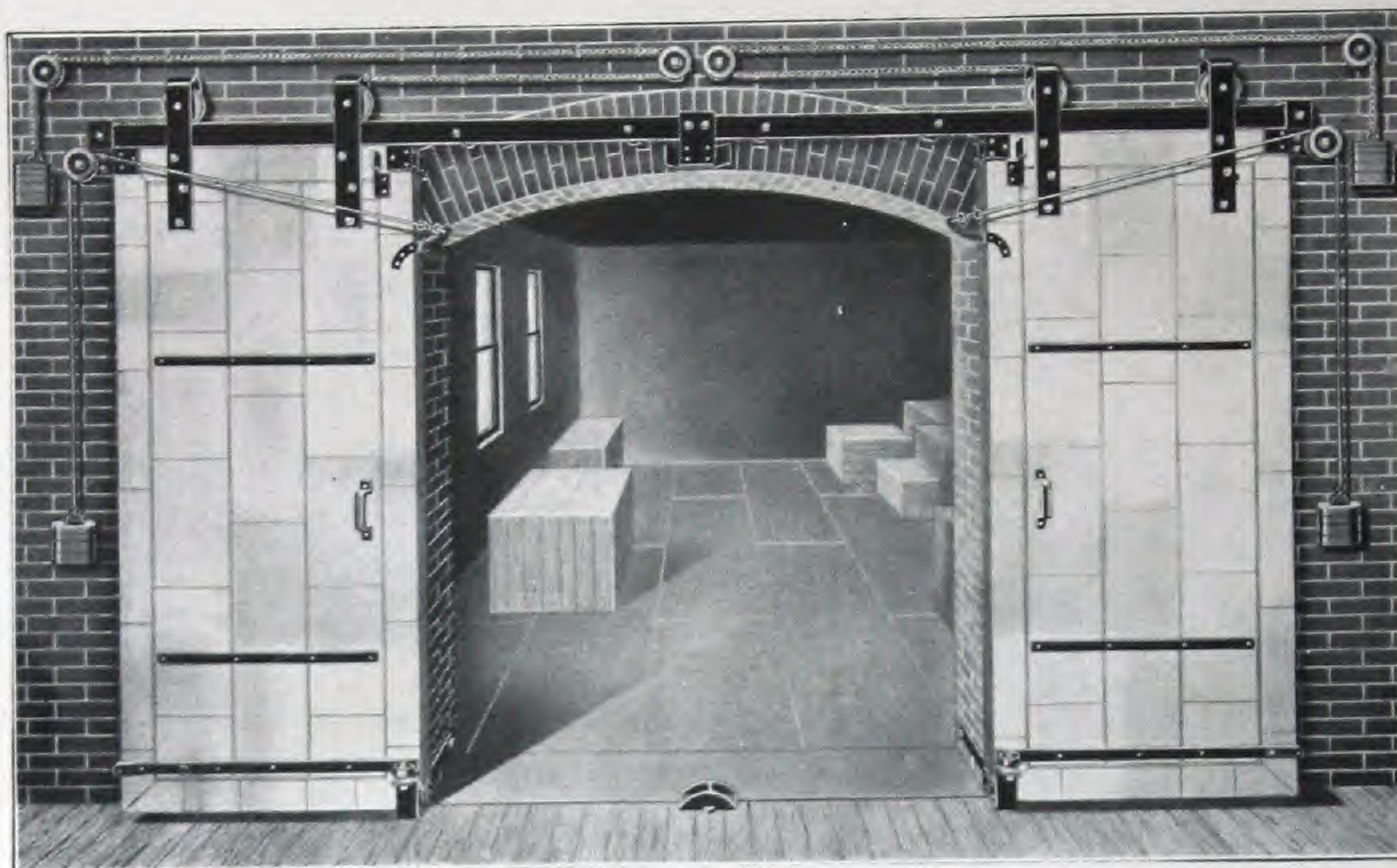


R-W Single Link Flat Track Fire Door Fixtures

For Pairs of Sliding Doors Level Track

R-W No. 302-2 For Two-ply (1 3/4 inch) tin Clad Doors.
R-W No. 302-3 For Three-ply (2 5/8 inch) Tin Clad Doors.
R-W No. 1302 For "FyeR-Wall" Sheet Metal Doors.
(Requires 17" Headroom).



No. 302 Fire Door Fixtures Applied to Tin Clad Fire Doors.

The above fixture is operated the same as regular No. 303 illustrated on pages 38-39 except using double sliding doors.

Designed to meet special conditions such as not sufficient wall space on one side to slid a single door and where low headroom will not permit the use of regular No. 204 fixtures.

This type has one fusible link on each door and both are exposed in the opening at all times.

Directions for Ordering.

See page 38 and give all information asked for.

NOTE: This fixture requires 17 inches of headroom for non-adjustable hangers and half the width of opening plus 20 inches wall space on each side of opening. Add three inches headroom for adjustable hangers.

Detail of parts shown on pages 20-21. See pages 82-85 for R-W Standard Approved and Labeled Tin Clad, and R-W "FyeR-Wall" sheet metal doors. Hardware suitable for Saino and Merchant and Evans Doors furnished when required.

List Price for Nos. 302-2, 302-3, and 1302 Fire Door Fixtures

List price includes non-adjustable hangers, track and fixtures complete for doors when used on one side of wall only. If doors are to be used on both sides of wall, double sets will be required and the price will be doubled. Fixtures packed complete with all bolts and screws for attaching parts to door, heavy cast washers for wall bolts and necessary counter-balance weights. Weights are furnished regularly for openings 8' high. If opening is higher, additional weights are required.

Wall bolts are not included, but will be furnished at moderate price if thickness of wall is given.

Width of Opening with 2 pr. Hangers	List Price	Weight per Set, Lbs.	Width of Opening with 2 pr. Hangers.	List Price	Weight per Set, Lbs.
3 feet	\$36.40	264	7 feet	\$42.40	326
3 1/2 feet	37.10	269	7 1/2 feet	43.10	331
4 feet	37.80	275	8 feet	43.80	337
4 1/2 feet	38.50	292	8 1/2 feet	44.50	342
5 feet	39.20	298	9 feet	45.20	360
5 1/2 feet	39.90	303	9 1/2 feet	45.90	365
6 feet	40.60	309	10 feet	46.60	371
6 1/2 feet	41.70	320			

No. 302-2, No. 302-3 or No. 1302 Automatics only, weight 79 lbs. Per set.....\$12.00

No. 302-2, No. 302-3 or No. 1302 fixtures only, less Hangers, Track and Brackets; Binder, Chafe and Guide

Roll Strips, weight 158 lbs. Per set..... 23.00

†No. 204-84 Track only with brackets, weight 4 1/2 lbs. Per foot40

No. 102-2 x 303 Hangers only, (page 52) used with No. 302-2 fixtures, weight 30 lbs. Per pair 4.10

No. 102-3 x 303 Hangers only (page 52) used with No. 302-3 fixtures, weight 30 lbs. Per pair..... 4.10

No. 1102 x 1302 Hangers only, with Back Plates (page 52), used with No. 1302 fixtures, wt. 35 lbs. Per pair.. 4.10

No. 202 x 303 Adjustable Hangers only, (page 52), weight 35 lbs. Per pair..... 7.00

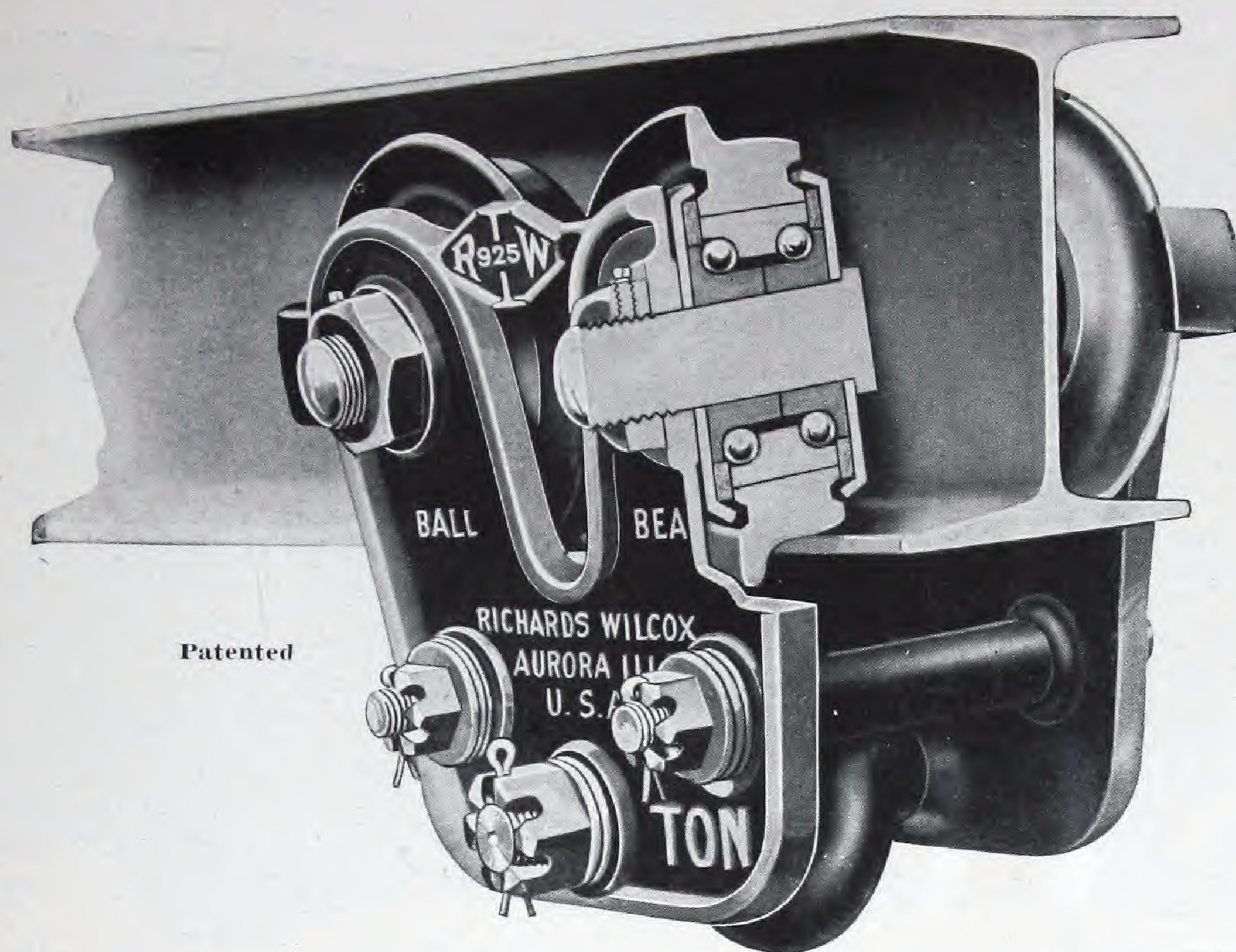
†Length of each track equals width of opening plus 8 inches.

Discount.....

Richards-Wilcox Mfg. Co. Aurora, Illinois

R-W NO. 925 BALL-BEARING I-BEAM TROLLEYS

Made
In
Seven
Sizes



Each Trolley
Adjustable to
Three Sizes
of I-Beams

Patented

Exceptionally Easy Operating Trolleys

High test malleable iron side plates and yoke. Wheels of hard grey iron with treads crowned to give minimum friction and chilled to give maximum hardness and minimum wear. Short wheel base operates easily on curves. Combination radial and thrust bearings, ball races are ground. High duty "AA" grade chrome alloy steel balls. Felt washers prevent dust and dirt from reaching bearings and provide perfect lubrication, as felt absorbs oil from oil hole and transmits it to bearings continually. Spreader rods set loose in oversized holes so that trolley sides can pivot about the load pin, insuring even distribution of load on all four wheels under all conditions. Bumpers on the end of frame sides prevents trolleys from damaging wheel flanges when running together.

List Price and Dimension Table

No. and Capacity of Trolley Tons	*Standard Size of I-Beams, Inches	Width of Wheel-Tread, Inches	Diam. of Wheels on Tread, Inches, A	Wheel Centers, Inches, B	Length Over All, Inches, C	Clearance Below I-Beam, Inches, D	Distance from Bottom of I-Beam to yoke, Inches, E	Diameter of Yoke, Inches, F	Width Over All, Inches, **G	Pull Required to Start Full Load Lbs.	Weight, Lbs.	List Price, Each
925-1/4	4, 5, 6	5/8	2 1/8	3 1/8	8 1/4	3/4	3	1 3/8	6 1/4	10	22	\$22.00
925-1/2	5, 6, 7	3/4	3 3/4	4 1/8	10 1/4	1	3 1/2	1 3/8	7 1/2	17	38	25.00
925-1	6, 7, 8	1 1/8	4 5/8	5 3/4	12 1/4	1 1/4	4	1 3/8	8	37	62	32.00
925-1 1/2	7, 8, 9	1 3/8	5 1/2	6 7/8	14 1/2	1 1/4	4 1/2	1 3/4	9 1/2	45	84	40.00
925-2	8, 9, 10	1 5/8	6 1/8	7 1/8	16 3/4	1 1/4	5	1 3/4	10 3/4	50	116	48.00
925-3	9, 10, 12	1 7/8	7 1/8	9 1/8	19	1 1/4	5 1/2	1 1/2	11 1/4	75	170	64.00
925-4	10, 12, 15	1 1/2	7 1/8	10	21	1 1/4	6	1 1/2	12 1/4	95	210	80.00

*Trolleys can be furnished to run on larger size beams at a list price of \$3.00 extra.

**This dimension applies to trolleys running on smallest of the three beams of each capacity listed in column two. Add 1/8 inch for each larger size beam.

DISCOUNT.....

For Dimension Diagrams See Opposite Page

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CCA

FIRE DOORS *AND* HARDWARE



MANUFACTURED BY

Richards-Wilcox Mfg. Co.

"A Hanger for any Door that Slides."

AURORA, ILLINOIS, U.S.A.



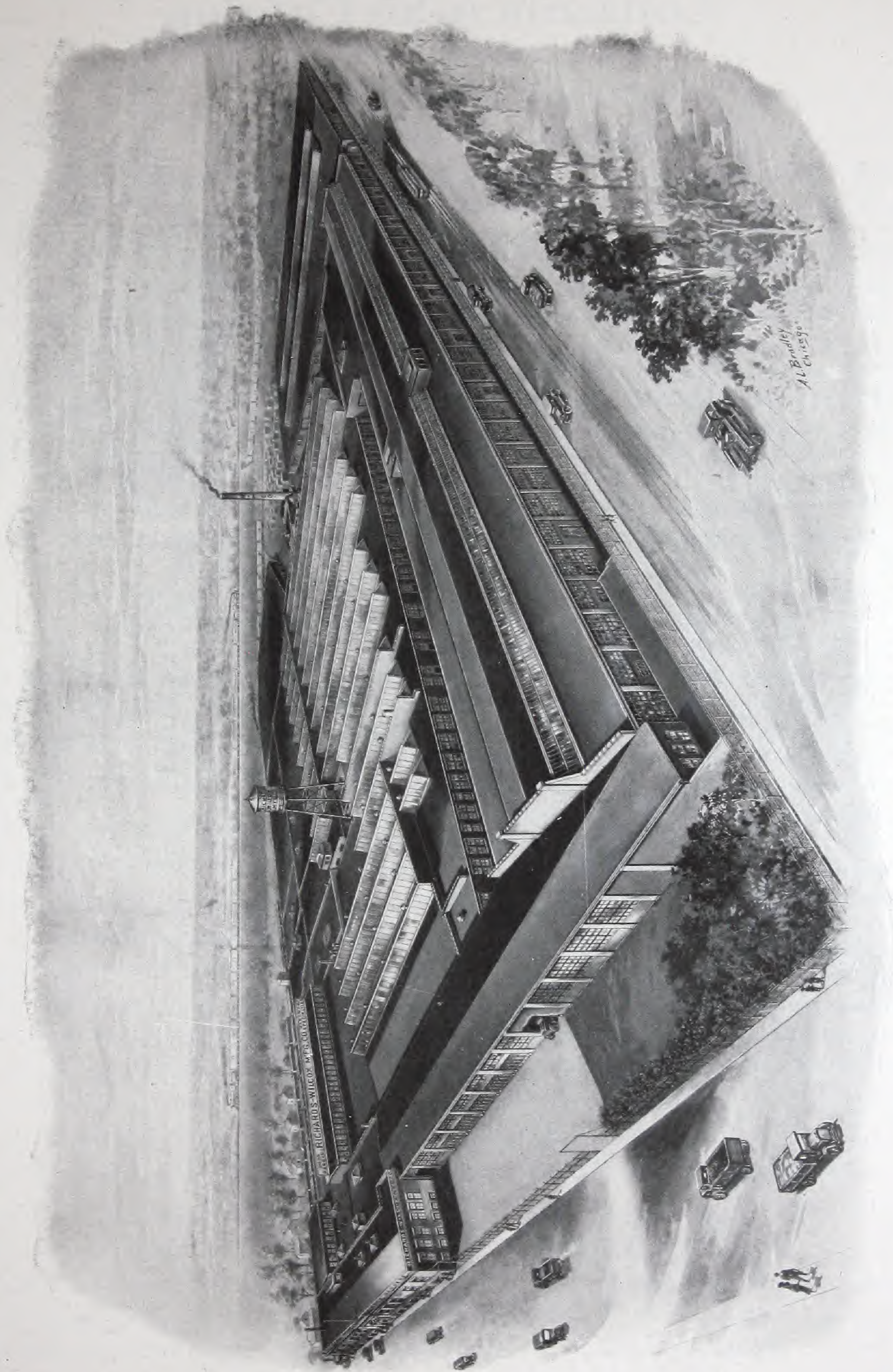


AUG 11 '28

FIRE DOORS



& HARDWARE



MAIN OFFICE AND FACTORY
RICHARDS-WILCOX MFG. CO., AURORA, ILLINOIS



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The Value of Fire Door Protection



You would be reluctant to accept the insurance company's settlement if your plant burned today. Yet that is all you would get if your factory was wiped out. The time lost—the business you might have done, is something that does not enter into any insurance adjustment.

But the insurance companies—all of them, are keen to prevent fires. That is why they offer reductions of premiums on property protected by

RICHARDS-WILCOX Automatic Fire Door Equipment

Three thousand human lives and \$450,000,000.00 in property is the annual toll of the fire demon in the United States. The rapid development of the country is partly responsible for this stupendous loss of life and material, and the loss of business prestige which results therefrom.

When fire starts in your property, the first three minutes count infinitely more than the next three hours.

If you could be on the spot when the fire starts, you could avert disaster to your property and your business. Of course, you can't be there—but modern invention has provided you R-W Automatic Fire Door Equipment as a personal representative that can be there constantly, day and night—a representative with a record of having saved from fire, millions of dollars worth of property—a representative which stops the spread of fire before the fire department arrives, before the alarm is turned in, before anyone knows there is a fire; a representative which acts on the law that it is easier to prevent the spread of fires than to extinguish them; a representative which automatically closes the fire doors and confines the flames to a single spot.

Inspection and labeling under direction of the Underwriter's Laboratories, Inc., combined with intensive care, conscientious workmanship and keen supervision in the manufacture of R-W Fire Door Hardware and Automatic Fixtures insures equipment of dependability, as is manifested whenever R-W Fire Doors and Hardware are put to the supreme test.

The instances presented on the following pages are representative of the millions of dollars of property saved from fire by R-W fire door equipment.

An ounce of Fire Doors is worth a pound of Insurance

R-W Fire Door Equipment Stops Raging Fire at Los Angeles

Part of four-story paper box factory protected by R-W equipment, saved from flames, enabling the industry to continue its business the day after the conflagration.



Interior view of Renshaw, Jones & Sutton factory after recent fire, showing R-W fire door equipment which automatically covered openings in fire wall and saved portion of factory.

No severer test has ever been put on any device than was withstood by R-W Fire Door Equipment in the fire which destroyed part of the Renshaw, Jones & Sutton paper box factory, occupying a four-story brick building at the northwest corner of Pico and San Pedro Streets, Los Angeles, California.

The conflagration which raged in the burned portion of the building was most intense, it being estimated that the heat reached approximately 2,400 to 2,500 degrees. The accompanying pictures, photographed immediately after the fire, show how intense the conflagration was, as indicated by the ruins.

They also show each one of the fire doors intact as they closed automatically. An examination showed the wood in the doors had been charred by the intense heat, but not burned through. The metal covering on all the doors was intact.

The portion of the building in which the fire originated, comprising about three-fifths of the total area, was completely gutted by the flames while the remaining portion of the building, protected by a fire wall equipped with fire doors operating automatically, at the openings, was not reached by the fire. Operations were resumed in this part of the factory the following morning, thereby averting a complete suspension of business.

The building is about 65x140 ft. with brick walls and heavy mill interior construction. The main openings were 8x8 ft., closed by Underwriter's Standard Construction Fire Doors, 2½" thick. They were mounted with R-W Fire Door Hardware, having Fusible Links separating at a temperature of 160 degrees. The Sliding doors operated by gravity while the swinging doors were operated by cables and weights. Every one of the thirteen doors in the firewall closed automatically before the flames reached the portion of the building separated by the fire wall and effectively protected it from the fire.

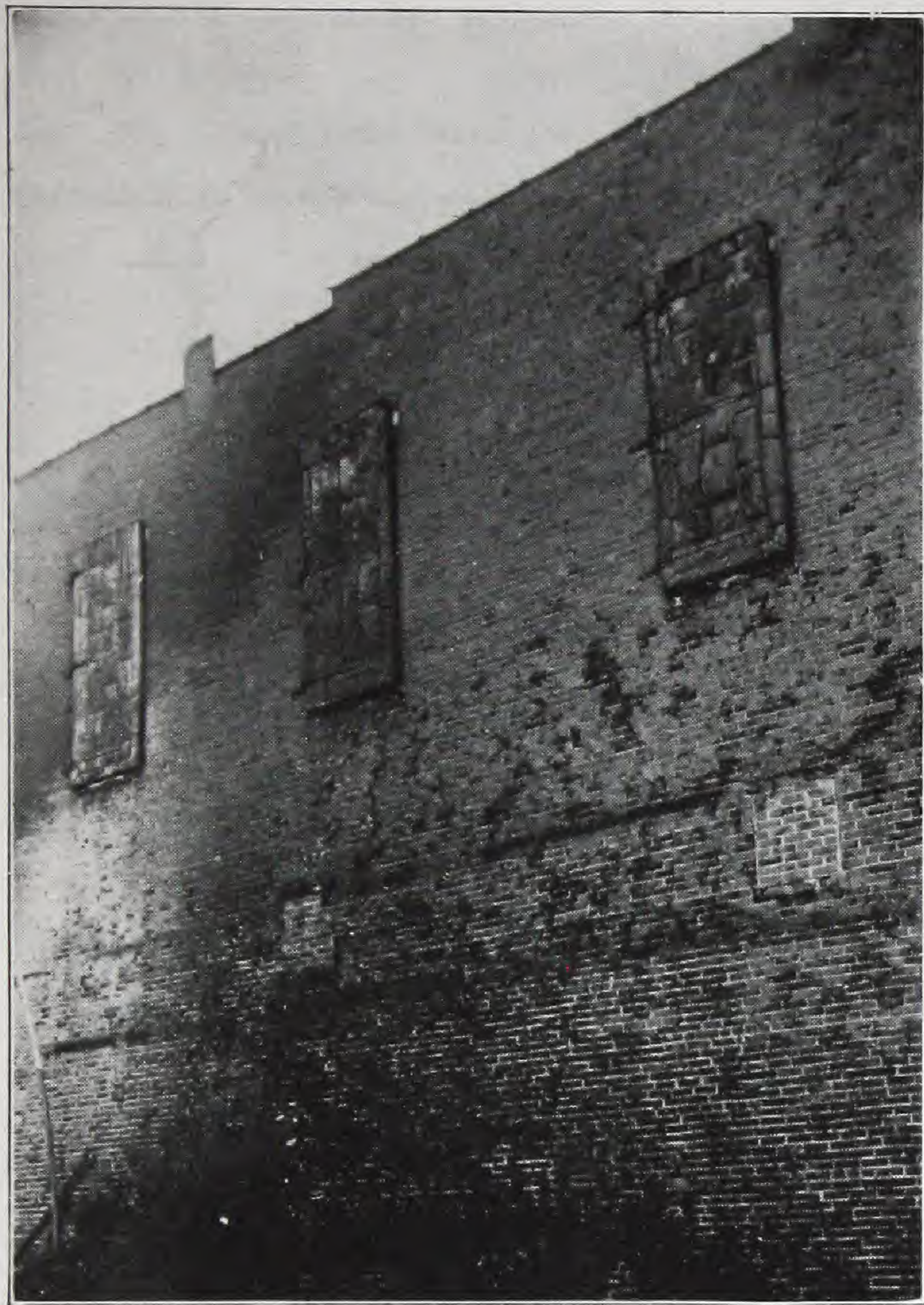


Interior view of burned portion of Renshaw, Jones & Sutton factory, showing intense character of fire, spread of which was prevented by R-W fire door equipment.

You can start a fire behind an R-W Fire Door—but you can't make it go through



Building Saved from Fire by R-W Fire Door Equipment at Milford, Ill.



Side of Fire Threatened Building Protected by Three R-W Fire Shutters on Lodge Hall Windows.

A disastrous fire destroyed a large part of the business district at Milford, Ill. When the fire was over, there stood intact in the center of the burned area, a single two-story brick building.

Four years before the fire, the owners of this building equipped it with Richards-Wilcox Automatic Fire Door Hardware and Window Shutters. They believed in being prepared for fire—and they acted on their belief. So that when the fire came their building resisted the flames and they were saved from the loss of business and good will which inevitably results from a disastrous fire, while the business is being readjusted to new conditions.

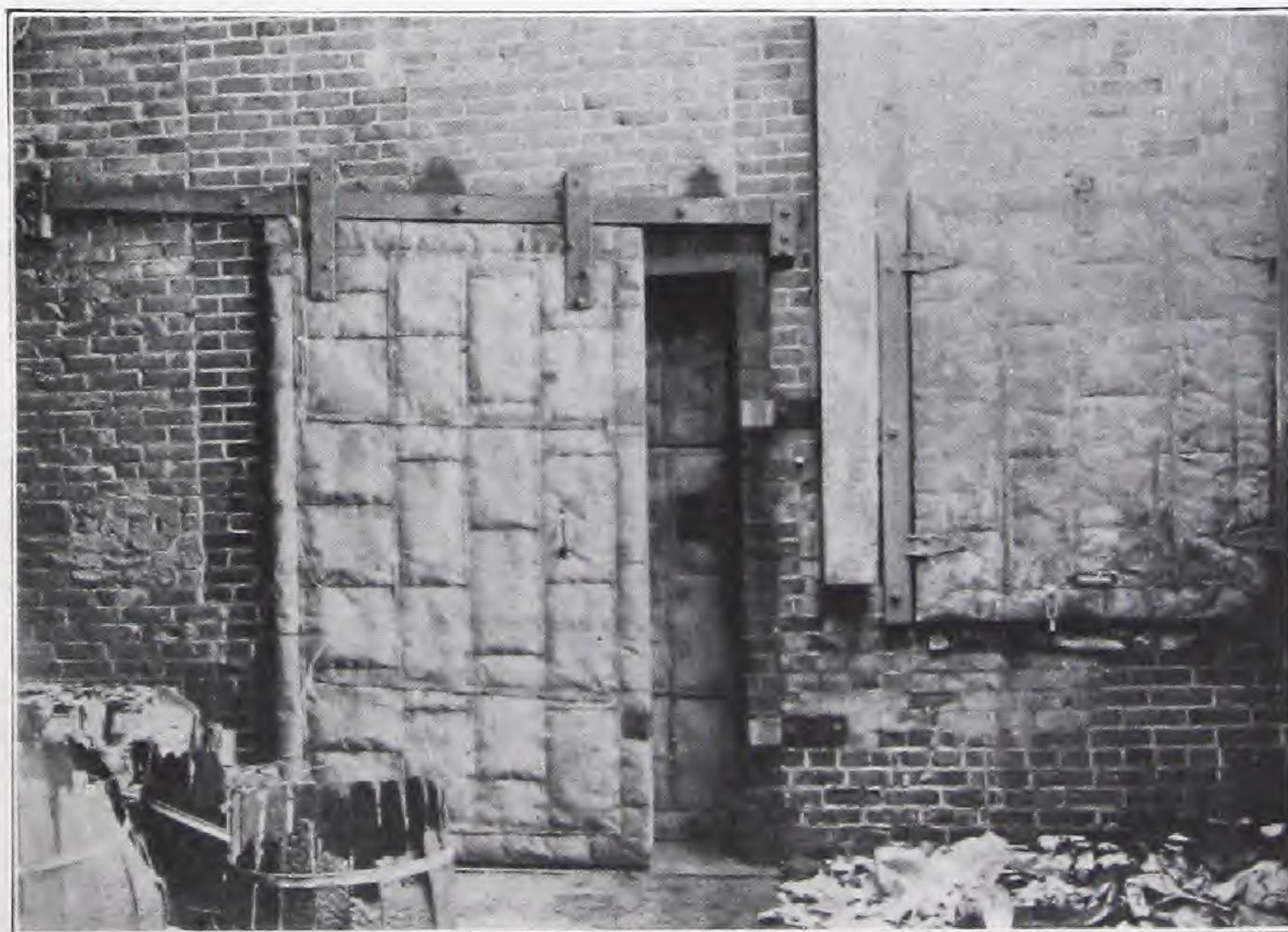
Gillfillan Brothers, the owners of the building, conduct a general merchandise business. On the upper floor are lodge rooms containing documents and other matter which could not have been replaced and the loss of which would have been keenly deplored.

The destruction of Gillfillan Brothers' stock would have been an irreparable loss at this particular time when it was difficult to replace supplies of any kind.

Gillfillan Brothers and the lodge officials express great gratification because of their good fortune and state that Richards-Wilcox Automatic Fire Door Hardware is an investment which pays big dividends.

Do You Know

That the total fire loss during 1921 is estimated at \$485,000,000.00 while in 1870 the aggregate fire loss was only \$51,653,690.00 based on available statistics? Today, American carelessness results in an average of a fire a minute. In 1870, the fire loss averaged \$19 a minute; today the corresponding figure is \$923.



Fire Doors are the better part of Fire Prevention



Richards-Wilcox Fire Door Fixtures Save \$1,500,000.00 in Tractor Plant Fire at Moline, Illinois

In spite of a persistent jinx of adverse conditions, Richards-Wilcox Fire Door Equipment at the Universal Tractor Works, Moline, Illinois, stops fire and prevents complete destruction of plant, which fire department of three cities would have been powerless to prevent had the conflagration succeeded in passing the fire doors.

A telephone strike, lack of water pressure and carelessness of workmen conspired unsuccessfully against Richards-Wilcox Automatic Fire Door Fixtures in a costly fire which attacked the plant of the Universal Tractor Works, Moline, Illinois, Sunday evening, August 24, 1919.

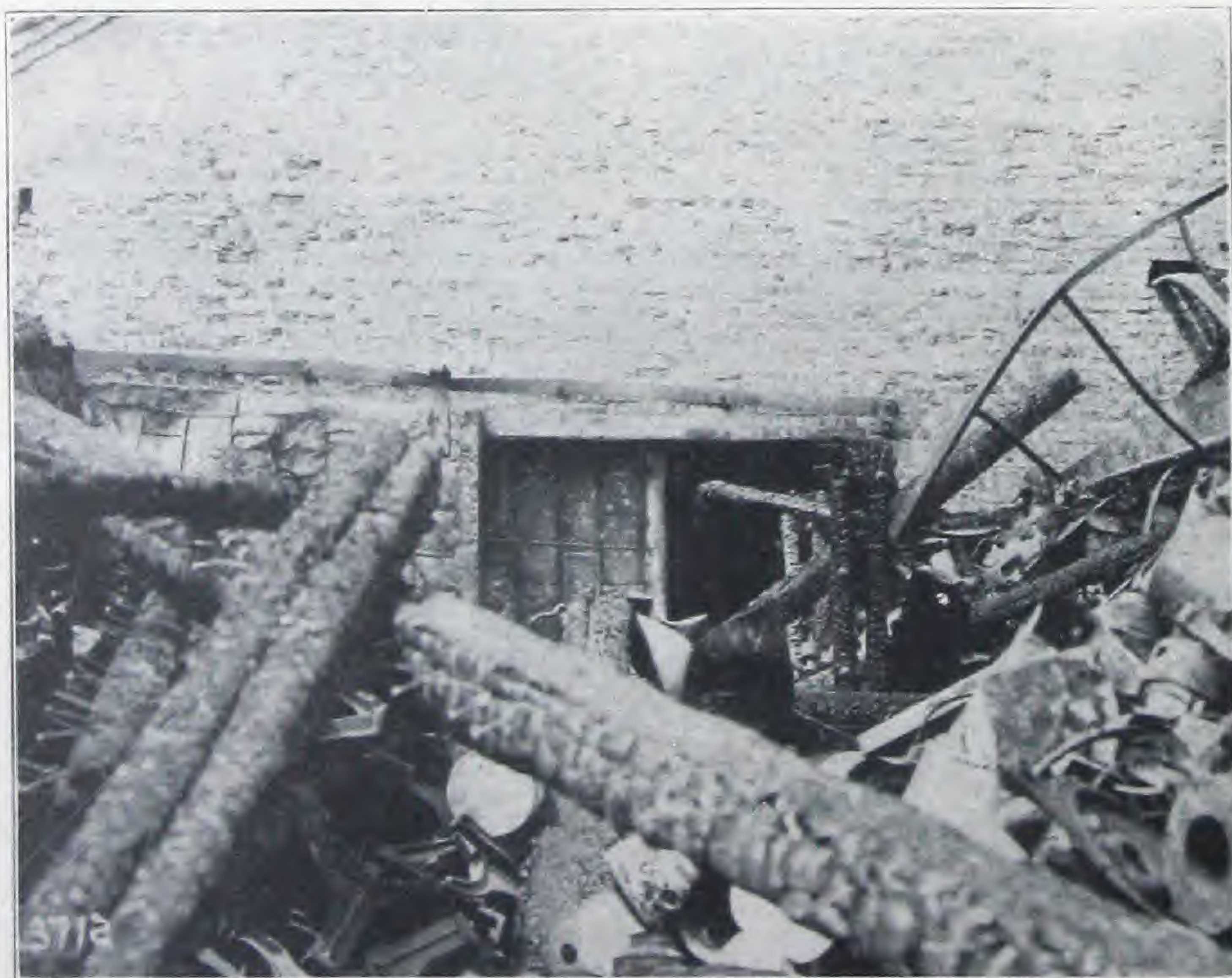
The fire originated in the main factory building of the works and inflicted a loss estimated conservatively at half a million dollars.

But for the effective operation of the Richards-Wilcox fire door fixtures in the fire wall which divided the building into two sections an additional million and a half dollars worth of property would unquestionably have been wiped out, according to the statement of Chief Engineer Clark of the Tractor Company.

It would have required at least two years to reproduce the machinery in the saved building, as much of it was special equipment.

The section of the building saved is 900 feet wide. In the 180 foot wall separating these two sections there were two door-way openings, each of these openings being equipped with two R-W Automatic Fire Doors—one on each side of the wall.

All four of the fire doors were open when the fire started. Three of them closed tight when the temperature reached 160 degrees and fused the sensitive R-W fusible links. The links on the fourth door fused, but a pile of castings which workmen had carelessly placed against it prevented the door from closing. This threw the burden of stopping the fire at this particular opening, on the single fire door which closed the opening, this single fire door being all that stood between the flames and property worth a million and a half dollars.



The Single R-W Fire Door which unaided stopped the fire at one door-way opening. This door stands in partly open position. It was opened, of course, after the fire was out. In the foreground may be seen the companion fire door which could not operate because workmen had piled the castings against it. This pile of castings is also prominent.

The fire spread rapidly. The heat became intense. The concrete supporting beams of the building crumbled away. Even the iron pillars of the building gave away. Each moment the suspense grew as people realized that only the fire doors could check the conflagration. The water pressure was so low that the pumps of the fire engines became ineffective. The wind carried the flames directly against the fire wall and the R-W fire doors.

Normal telephone service, it is believed, would have cut the damage to an insignificant figure. The delays experienced by the night watchman who put in the telephone calls for

It's Better to be Safe than Sorry



R-W Fire Door on the burned side of the fire wall. The steel envelope of the door has been chopped into since the fire. Note the concrete beams in the foreground which have been burned away until the reinforcing rods stick out several inches.

to carry to the roof. The pump of the Davenport Department was put in use, but the water pressure was so low that the pump drew the water out faster than it could be supplied by the water mains.

While the fire was at its height, walls crumbled under the fierce heat. Telegraph and telephone wires came down with the walls.

In spite of all these adverse conditions, the R-W Fire Door Equipment stood the test and stopped the conflagration. The fact that part of the building was saved obviated shutting down that section of the plant during reconstruction.

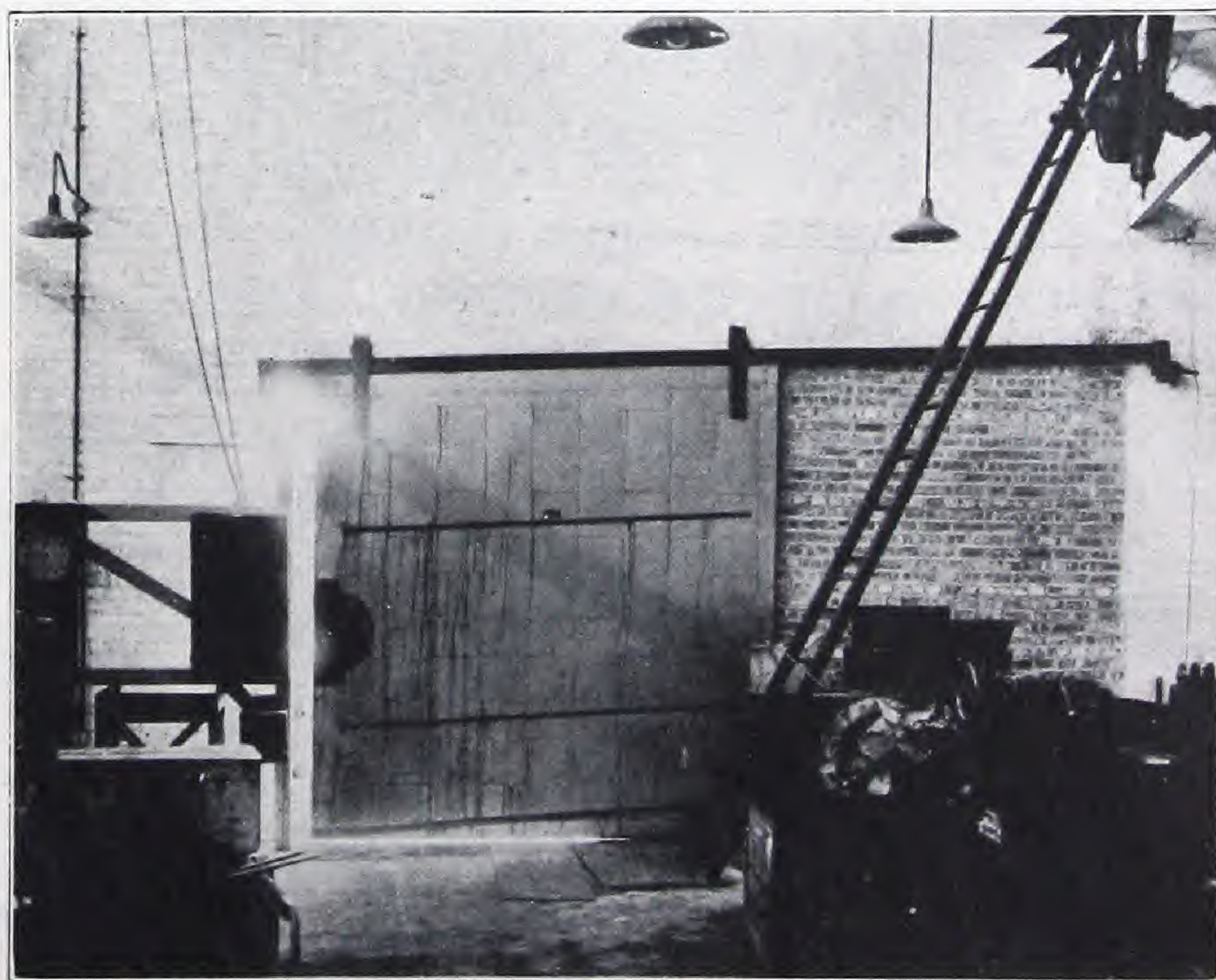
The fire began at 8:00 o'clock Sunday evening and was not gotten under any kind of control until after midnight.

Do You Know

"There are two things that cause a fire to burn and spread, namely, oxygen and a draft, so that although a building may be of fireproof construction, it becomes a veritable furnace when the fire has destroyed its doors and windows.

"Therefore, it is necessary that every opening in a building be properly fitted with either a fire door, fire window or shutters. These should be of a type that has been inspected and approved by the Underwriters' Laboratories, Inc., under direction of the National Board of Fire Underwriters, and bear their label."

—A. R. Babcock, Central
Mfg. District Magazine.



R-W Fire Door in the same opening as the fire door shown on the preceding page, but located on side of the wall toward the saved portion of the plant. Both of these doors automatically closed tight when the fire started.

help, allowed the flames to make great headway before the firemen arrived.

It was fully twenty-five minutes before the Rock Island Department was on the scene. It was an hour before the Moline Fire Chief was notified by a messenger in an automobile after frantic unsuccessful efforts to reach him over the telephone had to be abandoned.

When the Rock Island department arrived on the scene the structure was a solid mass of flames which shot skyward one hundred feet. Blazing embers fell blocks from the scene.

Altho the destroyed structure was but a one-story building, the water pressure was not sufficiently strong

In Time of Fortune Prepare for Fire



Fire Doors Save Business District at Carnegie, Oklahoma



When G. E. Cole, proprietor of the Cole Hardware Company, Carnegie, Okla., purchased the automatic fire doors shown on the side of the building in the accompanying photograph, a half block of frame buildings stood in the foreground of the picture—where the tile and machinery appear. That was eight years ago.

Two years later the frame buildings caught fire, a strong south wind carrying the flames directly against the Cole Hardware Company's building. The whole block, and in fact the entire business district

of Carnegie, were likely to be swept by the onrushing flames. As the fire approached the Cole Store, however, the fire doors automatically closed, sealing the wall tightly against the Demon which threatened its destruction, blocking the flames absolutely and confining their devastation to the half block mentioned. In the words of Mr. Cole himself, who was in his place of business at the time, "I would not have known there was a fire out there by the way things were in the store."

This photograph was taken six years after the fire. The fire doors have been repainted and the hardware is intact and as rigid as ever, presenting an impressive testimonial to the efficacy of Richards-Wilcox Fire Doors and Automatic Fire Door Hardware.

The R-W line of Fire Door Hardware is the most complete and extensive manufactured and is doubly certain of being perfect because inspected and labeled by the Underwriter's Laboratories, Inc. It not only saves property from fires and saves business from loss of good will and patronage incident to fires, but reduces the cost of fire insurance—which is another evidence of its efficacy. Fire Insurance Companies would not offer a premium for the installation of R-W Automatic Fire Doors if they were doubtful as to their value.

There are two points relating to value that many business men do not realize until they have actually gone through an adjustment. First, that the adjustment is made on the basis of the cash value at the time of the fire—not the value at the time the insurance was taken out.

Second, that the adjustment is made on the sound or depreciated value—not the value to replace new. Upon reflection it will be seen that both these points are proper and just.

Were losses settled on the basis of the value to replace new the property, a moral hazard would be created which would put a premium upon dishonesty and carelessness. The insurance companies must make accumulation through the medium of premiums to meet the losses; therefore, the more losses, the larger premiums. Adjusting on the basis of the sound depreciated value is the safeguard for low rates and against a tide of arson.

Hope for the Best, and prepare for Fire

How Automatic Fire Door Equipment is Made Sensitive for Fires and Strong for Daily Service

A description of the methods of manufacture responsible for the exceptional service embodied in Fusible Link, R-W. No. 97, and the means pursued to insure perfect action under all conditions.

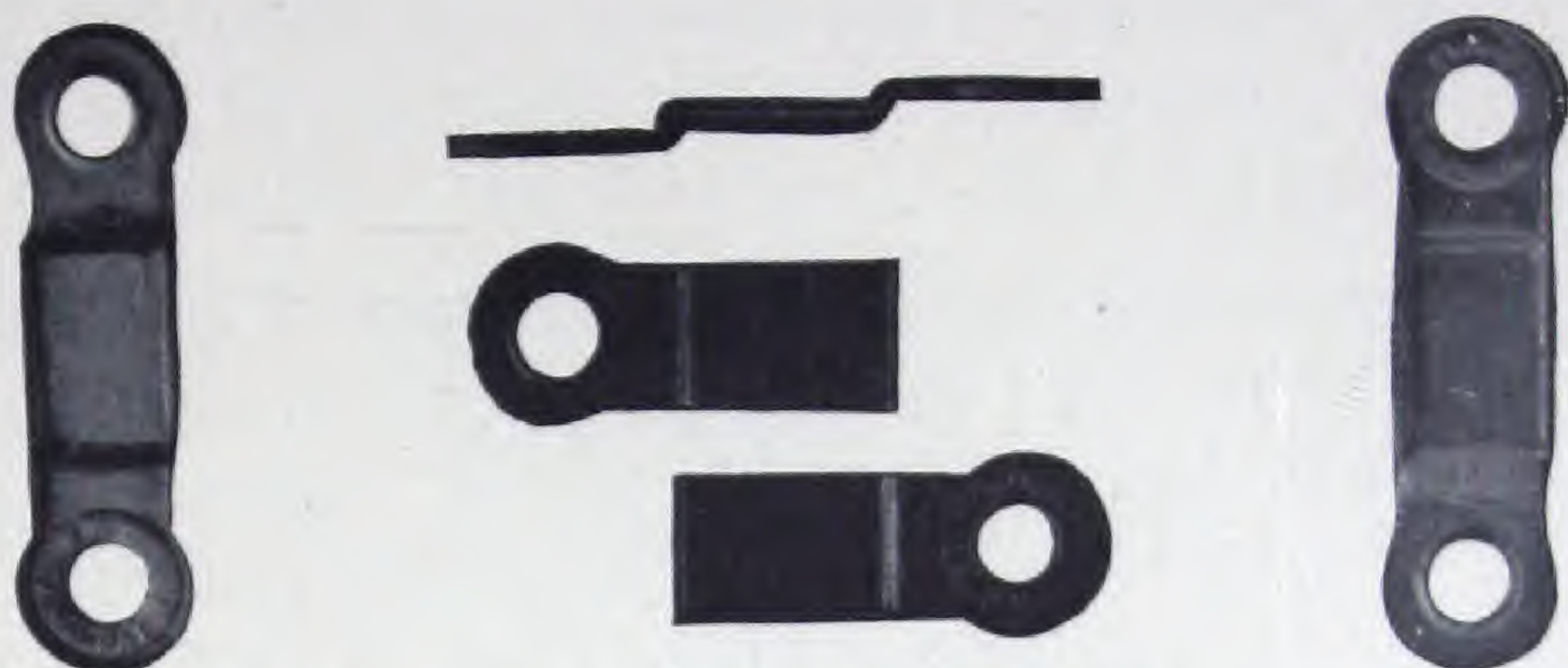
The automatic closing of fire doors depends on the instantaneous separation of the little fusible link at the approach of fire, releasing the counter-balance weights and throwing the doors into closing motion. More responsibility rests on this fusible link in the weight cord which counterbalances the fire door than on any other element. If this link fails to function when fire approaches, the entire fire door equipment fails and becomes utterly useless of its purpose.

It is vitally important, then, that the fusible links of your fire door equipment be so painstakingly fabricated and constructed that there is not the slightest element of imperfection in them. They must be so perfect that they will function instantly, in spite of having been subjected for years after installation to the deteriorating effect of natural influences; in spite of the fact that they may have become coated with grime, dust and other deleterious matter, as well as being subjected to heat, cold, dryness, dampness and other conditions inclined to reduce their sensitiveness to fire.

With these considerations vividly in mind, the Richards-Wilcox fusible link was developed, and its effective action in stopping many fires, saving millions of dollars in property values (in some cases years having passed since installation) gives irrefutable evidence of its perfection.

R-W Fusible Link No. 97, shown in the accompanying illustration is made of phosphor-bronze, in two parts, with the date embossed on each piece. These two parts fit perfectly together on absolutely smooth cleaned surfaces and are joined with specially prepared solder. No chemicals are used in the fabrication of the link as any chemical element might cause corrosion, as time passed, and cause the two parts of the link to stick together. During the coating and soldering processes the solder must be kept at a uniform temperature. This is controlled by a thermostat, one end of which is immersed in the solder. This is necessary in order to preserve the proper proportions of the different metals of which the solder is made. If the temperature should be raised too high, some of the metals in the solder composition would be burned out.

The two pieces of the link are made very thin so the link will be easily affected by heat. The bent edge at the inner end of each of the two sections, which extends



Views of R-W No. 97 Fusible Link from unretouched photo showing sides of finished link and edge of semi-finished link (also, both sides of half-link phosphor-bronze blanks, before any soldering has been done on them.

A Fire Door is no more effective than its Fusible Link

over the shoulder of its companion piece, is beveled so that it will release readily when the solder melts. This bent piece gives strength to the link for supporting loads when the two parts of the link are held together by the solder; in fact, these links are so strong that many of them hold together under weight tests even after the rope eyelets have been torn out by the heavy weights suspended from the links.

In addition to the weight test, these fire links are subjected to two other tests during manufacture, under direction of the National Board of Fire Underwriters; i. e., "the hot water test" and the "plunge test."

In the hot water test, a number of links are immersed in a bath of water at 70 degrees Fahrenheit and a 1-lb. weight is attached to each link. The water is heated gradually from 70 degrees to 170 degrees at a predetermined rate designated by a chart furnished by the National Board of Fire Underwriters. The entire time required to raise this temperature from 70 degrees to 170 degrees, following the chart, is forty-five minutes. During the heating process, the water is constantly agitated so as to maintain a uniform temperature throughout all parts of the bath.

All of the links must fuse during the five second period in which the bath is raised from 160 to 165 degrees.

In the plunge test, the water bath is heated to 175 degrees. Then the links are taken one at a time, a 1-lb. weight attached to each link, and the link plunged into this bath. The links must not require more than $8\frac{1}{2}$ seconds before fusing. This test shows the sensitiveness of the link under quickly raised temperatures.

These two tests are made at our plant during manufacture. The links are picked at random out of every one hundred. Then, when we have a lot ready for shipment, the inspector comes from the Underwriters' Laboratories and makes similar tests. He spreads out all the links on a table so that he can examine each link individually to see that all parts are properly covered with solder. He then picks out a specified proportion of the links at random and gives them the "hot water" and "plunge" tests. If any of the links should fail in any respect to come up to requirements, the whole lot would be rejected.

In addition to this, periodically the Underwriters take links into their laboratories where they give them tests of various kinds; hot oven test; strength test; corrosion test; calcimine test; rough usage test.

The exceptional value of R-W No. 97 link is universally recognized and we have been highly complimented by the Underwriters' Laboratories for the uniform perfection of this link as shown by the severe tests which they give.



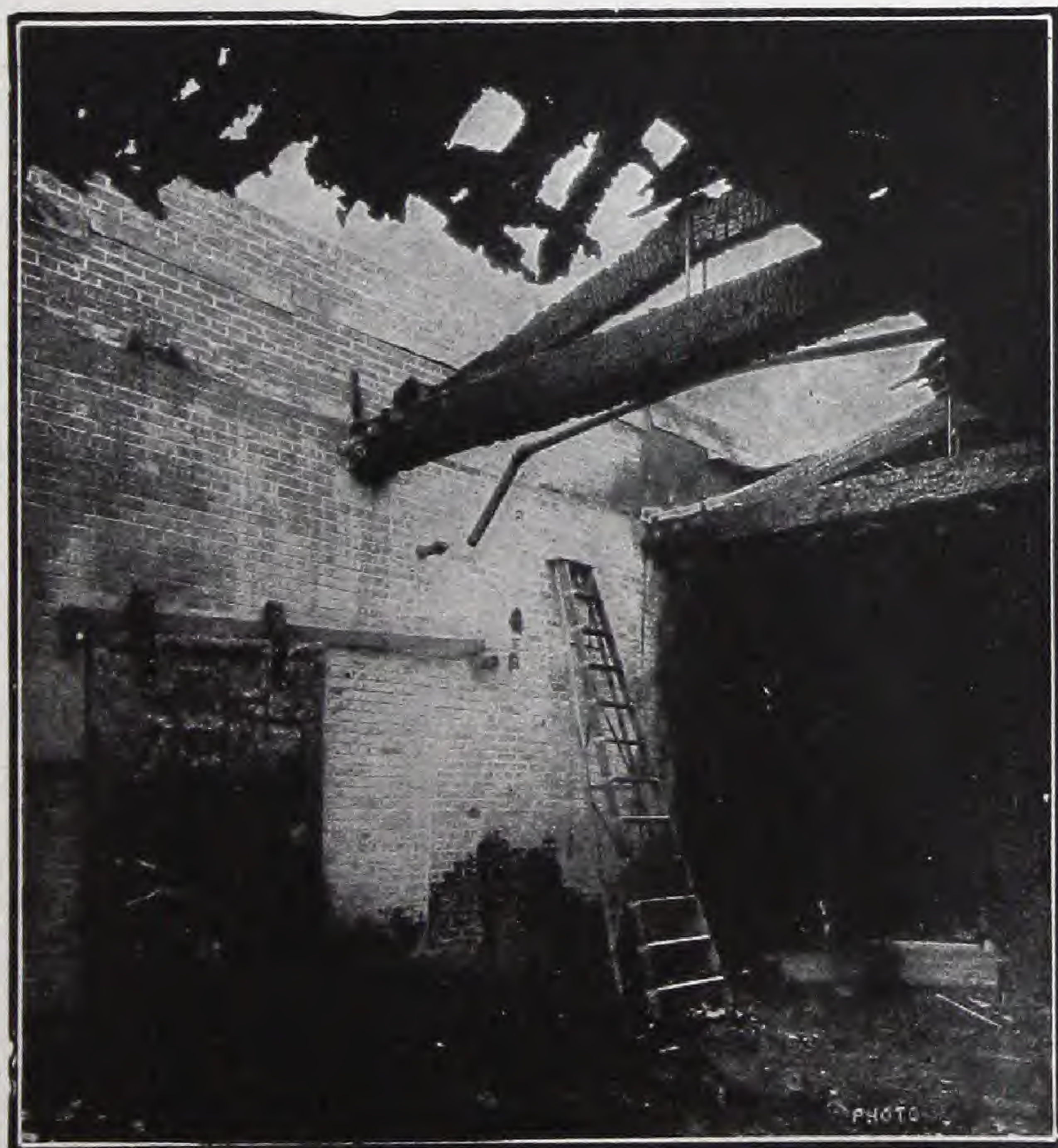
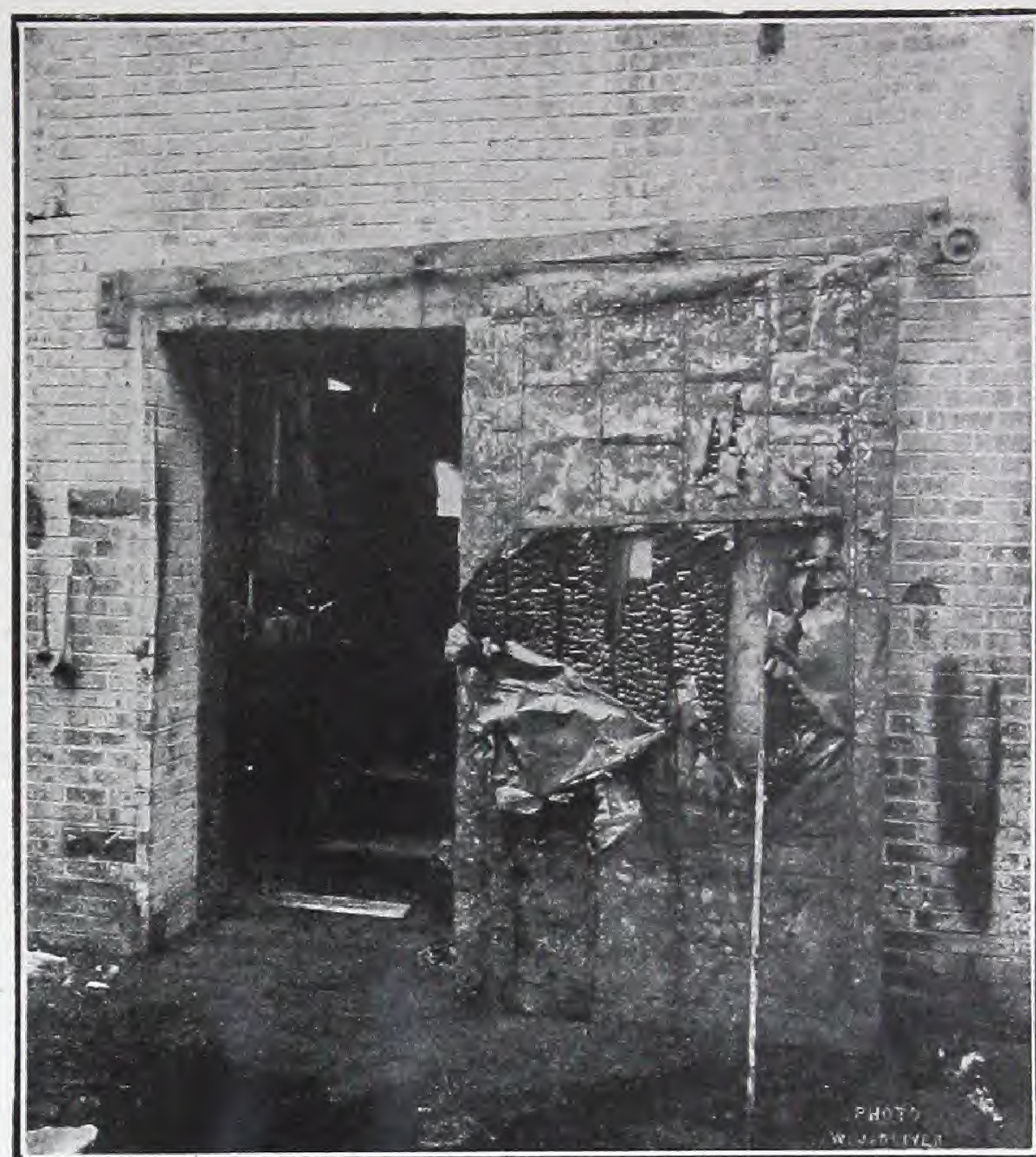
Reduce the Cost of Your Fire Insurance

\$200,000.00 Saved by R-W Fire Door Equipment at Calgary, Canada

Sunday morning, April 18, 1920, fire broke out in one of the Canadian plants of the Fairbanks, Morse Company at Calgary.

Because of the quietude incident to Sunday, the fire was not discovered until it had gained great headway and the fire department did not reach the somewhat isolated plant until the building in which the fire started was doomed.

Religious scruples, vacations, holidays, night time and other similar considerations which affect the actions of mankind have no effect on the sleepless vigilance of Richards-Wilcox Fire Door Fixtures. When the fire started in this Fairbanks, Morse plant, the door shown in the photograph closed, automatically shutting off the part of the building which it protected from the



portion in which the fire raged. The saved building contained a stock worth \$200,000.00 which would unquestionably have been wiped out except for the intervention of the Richards-Wilcox Fire Doors at the right time.

Do You Know

Canada's fire loss jumped from \$28,745,590.00 in 1920 to \$45,015,930.00 in 1921, or a per capita fire waste of \$5.22, according to the report issued by the Dominion Fire Prevention Association?

Canadian Underwriters are pointing to the contrast between these figures and those of Great Britain, where last year's loss totalled only \$36,400,000.00 or 90 cents per capita.

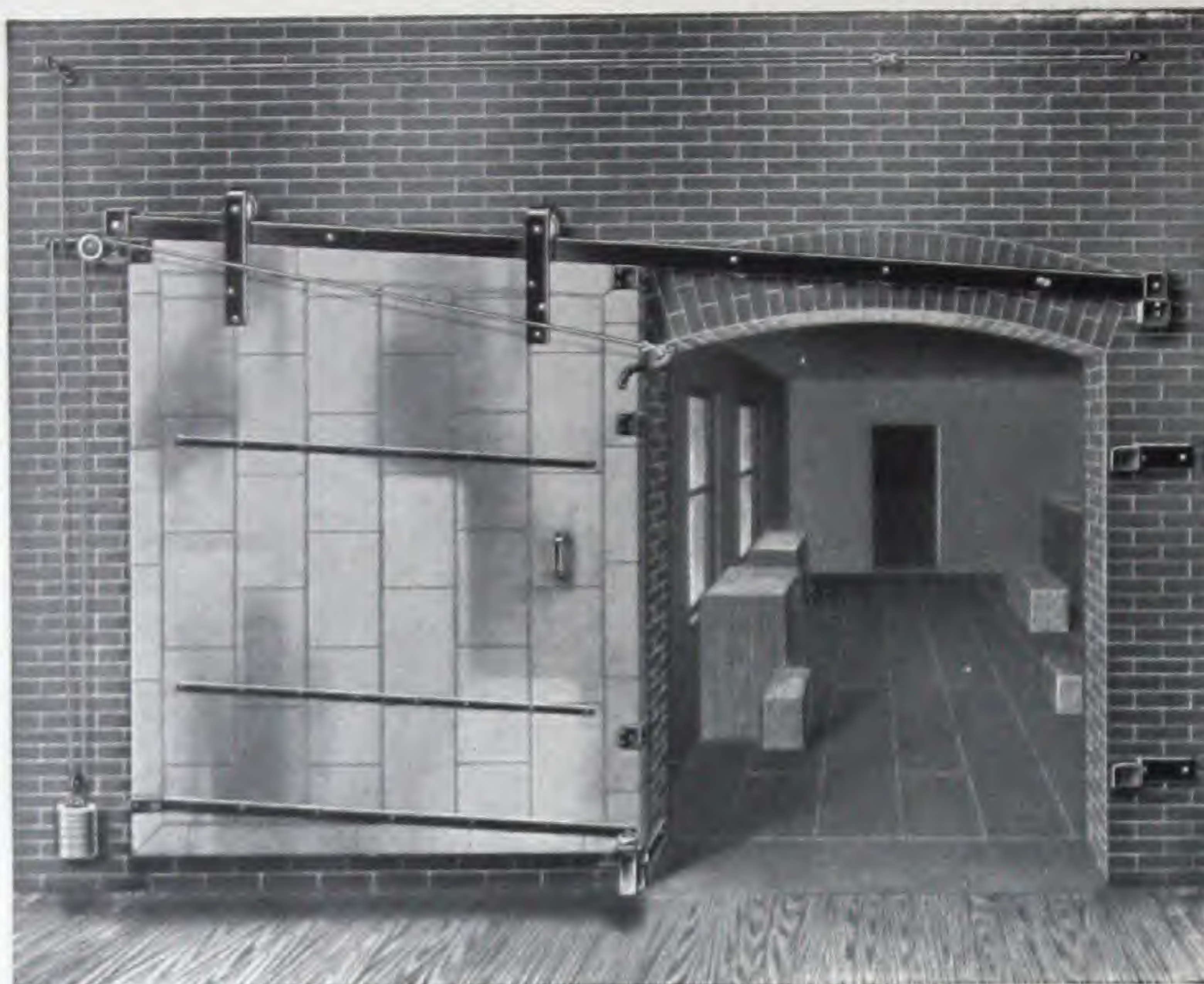
You may not miss the extra insurance premium Fire Doors would save, but you'll surely miss your business, if your plant burns down



R-W Monarch Two Link Flat Track Fire Door Fixtures

For Single Sliding Doors, Incline Track

R-W No. 102-2 For Two-ply (1- $\frac{3}{4}$ inch) Tin Clad Doors.
R-W No. 102-3 For Three-ply (2- $\frac{5}{8}$ inch) Tin Clad Doors.
R-W No. 1102 For "FyeR-Wall" Sheet Metal Doors.



No. 102 Fire Door Fixtures Applied to Tin Clad Fire Door

The above hardware is included in list of Fire Door Hardware approved and labeled by National Board of Fire Underwriters.

We recommend these fixtures where head-room exceeds 3 feet.

This arrangement of automatic device provides two fusible links—one constantly in opening and exposed from both sides and one link near ceiling. If either link fuses, door is released and closes by gravity. If doors are used on both sides of wall, the cord can be made to pass through wall near ceiling, at point where it is shown attached to the wall, in illustration, and same arrangement continued on other side, thus providing four links. The fusing of any one releases both doors.

DIRECTIONS FOR ORDERING

STATE: First—Number of openings and number of doors; whether doors are on one side or both sides of wall. If latter, mention if fixtures can be bolted together and state thickness of wall. Do not say doors when you mean openings, as doors must lap four inches on each side and at top.

Second—Width and height of opening, (mention width first).

Third—Thickness of doors, if two-ply tin clad (1 $\frac{1}{2}$ inches), three-ply tin clad (2 $\frac{1}{8}$ inches) or "FyeR-Wall" sheet metal doors.

Fourth—Thickness of wall, when wall bolts are required, or when doors are used on both sides of wall, in which case special U wall plates are required for guide rollers, when walls are less than 12" thick.

Fifth—Distance from edge of opening to walls at right angles, if any. State distances from highest points of openings, to nearest obstructions overhead.

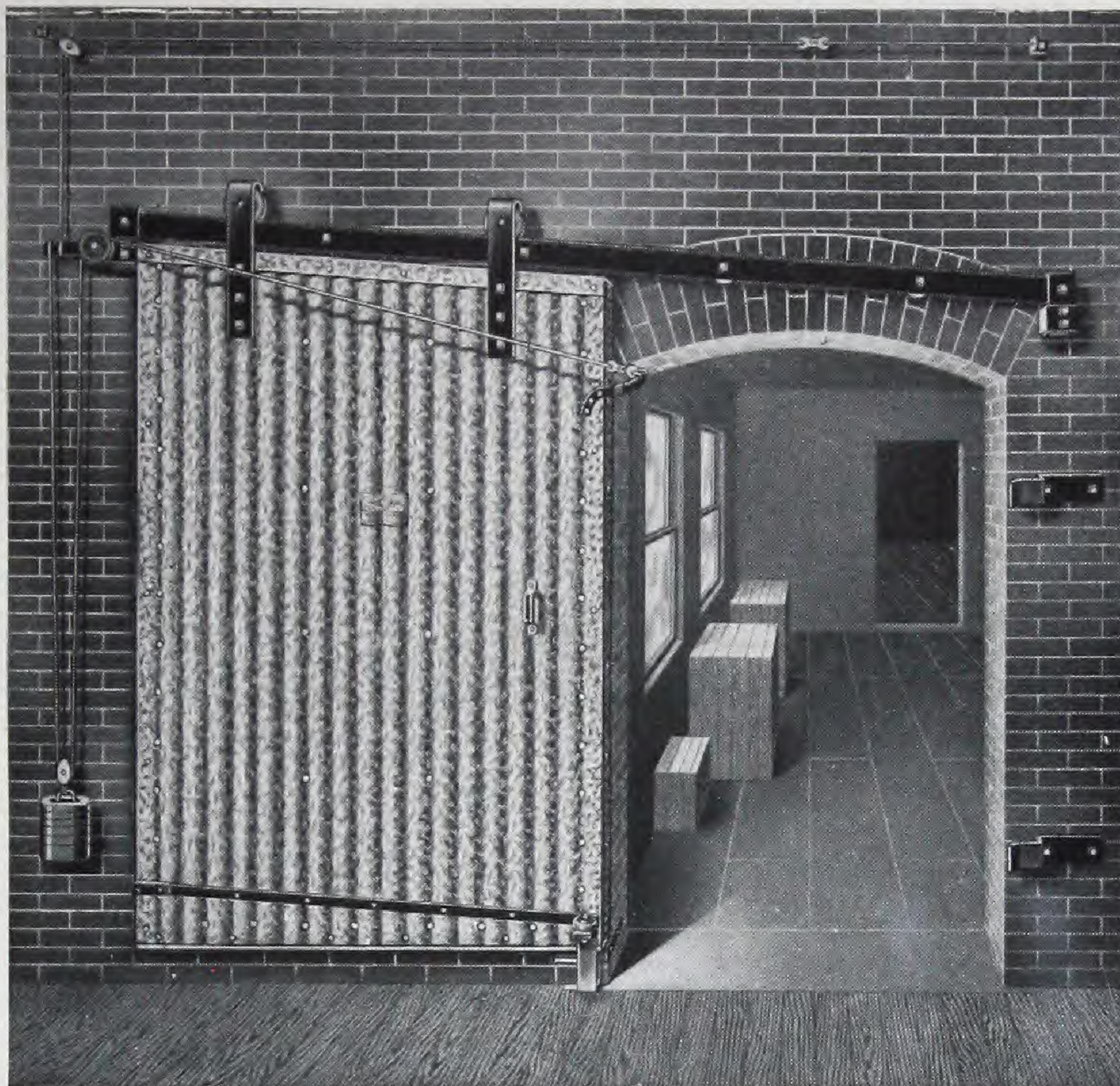
Sixth—If opening is square or arched top.

NOTE: Minimum clearances and special automatic closing arrangements are shown on page 15. Unless otherwise specified Standard Style will be furnished.

Detail of parts shown on pages 20 and 21. See pages 82-85 for R-W Standard Approved and Labeled Tin-Clad and R-W "FyeR-Wall" sheet metal doors. Approved hardware, suitable for Saino and Merchant & Evans doors, furnished when required.



R-W Monarch Two Link Flat Track Fire Door Fixtures



No. 1102 Fire Door Fixtures Applied to "FyeR-Wall" Sheet Metal Door

List Price for Nos. 102-2, 102-3 and 1102 Fire Door Fixtures

Price list includes non-adjustable hangers, track and fixtures complete for doors when used on one side of wall only. If doors are to be used on both sides of wall, double sets will be required and the price will be doubled. Fixtures packed complete with all bolts and screws for attaching parts to door, heavy cast washers for wall bolts and necessary counter balance weights. Weights are furnished regularly for openings 8' high. If opening is higher, additional weights are required. Wall bolts are not included, but will be furnished at a moderate price if thickness of wall is given.

Width of Opening with 1 pr. Hangers	List Price	Weight per Set, Lbs.	*Width of Opening with 1½ pr. Hangers	List Price	Weight per Set, Lbs.
3 feet	\$19.00	170	6½ feet	\$23.70	250
3½ feet	19.40	178	7 feet	24.00	258
4 feet	19.70	187	7½ feet	24.30	266
4½ feet	20.00	195	8 feet	24.70	282
5 feet	20.30	205	8½ feet	25.00	288
5½ feet	20.70	215	9 feet	25.30	297
6 feet	21.00	225	9½ feet	25.70	305
			10 feet	26.00	315

No. 102-2, 102-3 or No. 1102, Automatics only, weight 44 lbs., per set.....\$ 5.00

No. 102-2, 102-3 or 1102 Fixtures only, less Hangers, Track and Brackets; Binder, Chafe and Guide
Roll Strips, weight 94 lbs. per set..... 12.00

No. 102-84 Track only, with Brackets, weight 4½ lbs. per foot40
Length of Track equals twice width of opening plus 21"

No. 102-2 Hangers only (page 52), weight 30 lbs., per pair 4.10

No. 102-3 Hangers only (page 52), weight 30 lbs., per pair 4.10

No. 1102 Hangers with back plates, (page 52) weight 35 lbs. per pair..... 4.10

No. 202 Adjustable Hangers only, (page 52) weight 36 lbs. per pair..... 7.00

*For openings (not doors) over 6' wide, Underwriters require three hangers.

Discount.....



Packing List for R-W No. 102-2, 102-3 and No. 1102 Fire Door Fixtures —Standard Style.

102-2	102-3	1102	DESCRIPTION	List Price
1	..	..	No. 70-1 Flush Pull, each.....	.20
..	1	..	No. 70-2 Flush Pull, each.....	.25
1	..	..	No. 71-1 Bow Handle, each.....	.10
..	1	..	No. 71-2 Bow Handle, each.....	.15
..	..	1	No. 71-3 Bow Handle, each.....	.20
..	..	1	No. 71-4 Bow Handle, each.....	.25
1	1	1	No. 96 Fusible Link. (One additional link is attached to No. 102-97 Link Bracket, each.....)	.30
*	*	*	No. 102-SC Sash Cord with wire link attached. (As required), per foot.....	.05
1 Pr.	..	..	No. 102-2 Hangers. (Openings over 6' wide require 1½ pair), per pair.....	4.10
..	1 Pr.	..	No. 102-3 Hangers. (Openings over 6' wide require 1½ pair), per pair.....	4.10
1	1	1	No. 102-14 Pulley, each.....	.25
1	1	1	No. 102-41 Rope Angle, each.....	.15
1	1	1	No. 102-41 Rope Angle with No. 102-14 Pulley Attached, each.....	.40
*	*	*	No. 102-61 Cast Washers. (See table below). Not required when doors are used on both sides of wall, each.....	.15
8	8	..	No. 102-72 Bumper Shoes, each.....	.10
1	..	..	No. 102-80-2 Guide Roller. (For Angle Iron Sills Only), each.....	2.00
..	1	1	No. 102-80-3 Guide Roller. (For Angle Iron Sills Only), each.....	2.00
2	2	..	No. 102-82 Binder Strip. Length equals width of opening less 4", each.....	.40
1 Run	1 Run	1 Run	No. 102-84 Track. Length equals twice width of opening. Plus 21", each.....	.40
*	*	*	No. 102-85 Brackets. (See table below), each.....	.20
1	1	1	No. 102-86 Rope Pulley and Back Bumper with Trigger, complete..	1.70
1	1	1	No. 102-86½ Pulley. (Required only when doors are used on both sides of wall), each.....	1.00
1	1	1	No. 102-87 Front Bumper, each.....	1.00
1	1	1	No. 102-88 Guide Roll Strip. Length equals width of opening plus 3". (Plus 6" for 1102), each.....	.80
2	2	..	No. 102-89 Chafe Strips. Length equals width of opening less 4", each.....	.40
1	1	1	No. 102-91 Weight Holder, each.....	.15
2	..	..	No. 102-95-2 Binders, each.....	.80
..	2	2	No. 102-95-3 Binders, each.....	.80
1	1	1	No. 102-97 Link Bracket with No. 96 Fusible Link Attached, complete.....	.55
1	1	1	No. 102-98 Wedge, each.....	.10
*	*	*	No. 102-99 No. 1 Lightweight. (According to size of opening), each.....	.25
*	*	*	No. 102-99 No. 2 Heavyweights. (According to size of opening), each.....	.75
1	..	..	†No. 156-2 Guide Roller. (Omit for Angle Iron Sills), each.....	2.00
..	1	1	*No. 156-3 Guide Roller. (Omit for Angle Iron Sills), each.....	2.00
..	..	1 Pr.	No. 1102 Hangers, with backplates. (Openings over 6' wide require 1½ pair), per pair.....	4.10
..	..	2	No. 1102-90 Track Binders. (Openings over 6' wide require 3), each.....	.30
..	..	1	No. 1102-93 Rear Binder Pocket, each.....	1.00
..	..	1	No. 1102-94 Rear Binder Hook, each.....	.80
1	1	1	Package Screws and Bolts	

Discount.....

†No. 56-2 Boston Guide Roller may be substituted for item listed above if desired.
*No. 56-3 Boston Guide Roller may be substituted for item listed above if desired.

Table of No. 102-85 Brackets and No. 102-61 Washers for Above Fixtures.

Width of Opening	NUMBER OF BRACKETS	*Number of Washers
2' 0" to 4' 8"	5	10
4' 9" to 5' 2"	6	11
5' 3" to 7' 8"	7	12
7' 9" to 8' 8"	9	14
8' 9" to 11' 8"	10	15
11' 9" to 13' 0"	11	16
	Fixtures Only Require.....	5

*No. 1102 Fixtures require one more washer than shown above.

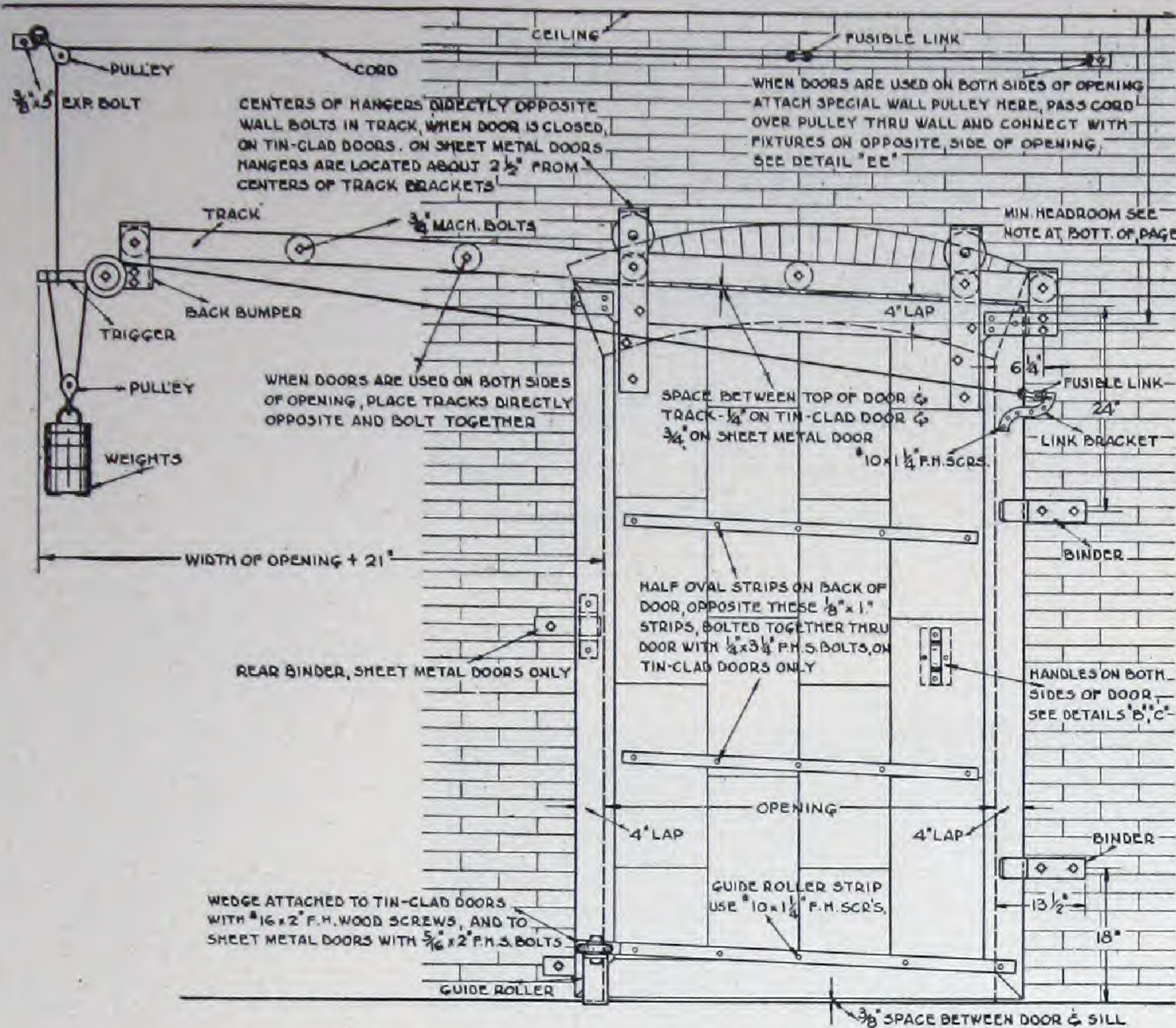
Wall Bolt List for Nos. 102-2, 102-3 and No. 1102 Fire Door Fixtures.

Wall Bolts are not furnished with sets of fixtures regularly but will be furnished at prevailing market prices when thickness of wall is given and customer requests them. The table below gives the number and size of bolts required for various sized openings. Note that the number of bolts is the same for hardware installed on one or both sides of wall.

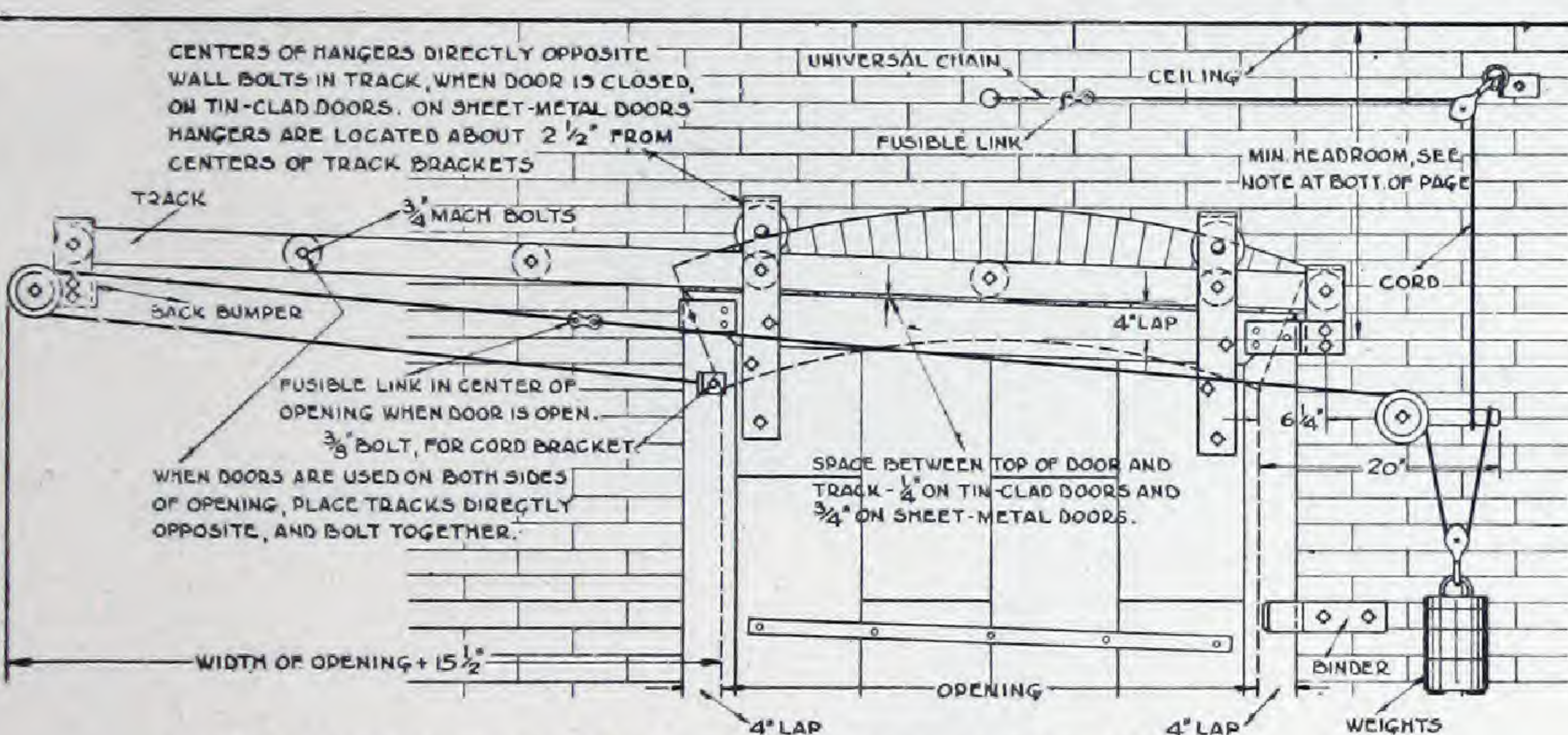
NUMBER OF ¾" BOLTS REQUIRED FOR VARYING WIDTHS OF DOORWAY OPENINGS

Fixtures bolts are used to fasten.....	LENGTH OF BOLTS REQUIRED FOR SETS INSTALLED					
	Opening 2' wide to 4' 8"	Opening 4' 9" to 5' 2"	Opening 5' 3" to 7' 8"	Opening 7' 9" to 8' 8"	Opening 8' 9" to 11' 8"	Opening 11' 9" to 13' 0"
Binders.....	4	4	4	4	4	4
*Guide Rollers.....	1	1	1	1	1	1
End Track Brackets.....	2	2	2	2	2	2
Center Track Brackets.....	3	4	5	7	8	9
Rear Binder Hook (in No. 1102 set only).....	1	1	1	1	1	1
Total Bolts in No. 102-2 and No. 102-3 sets.....	10	11	12	14	15	16
Total Bolts in No. 1102 sets.....	11	12	13	15	16	17

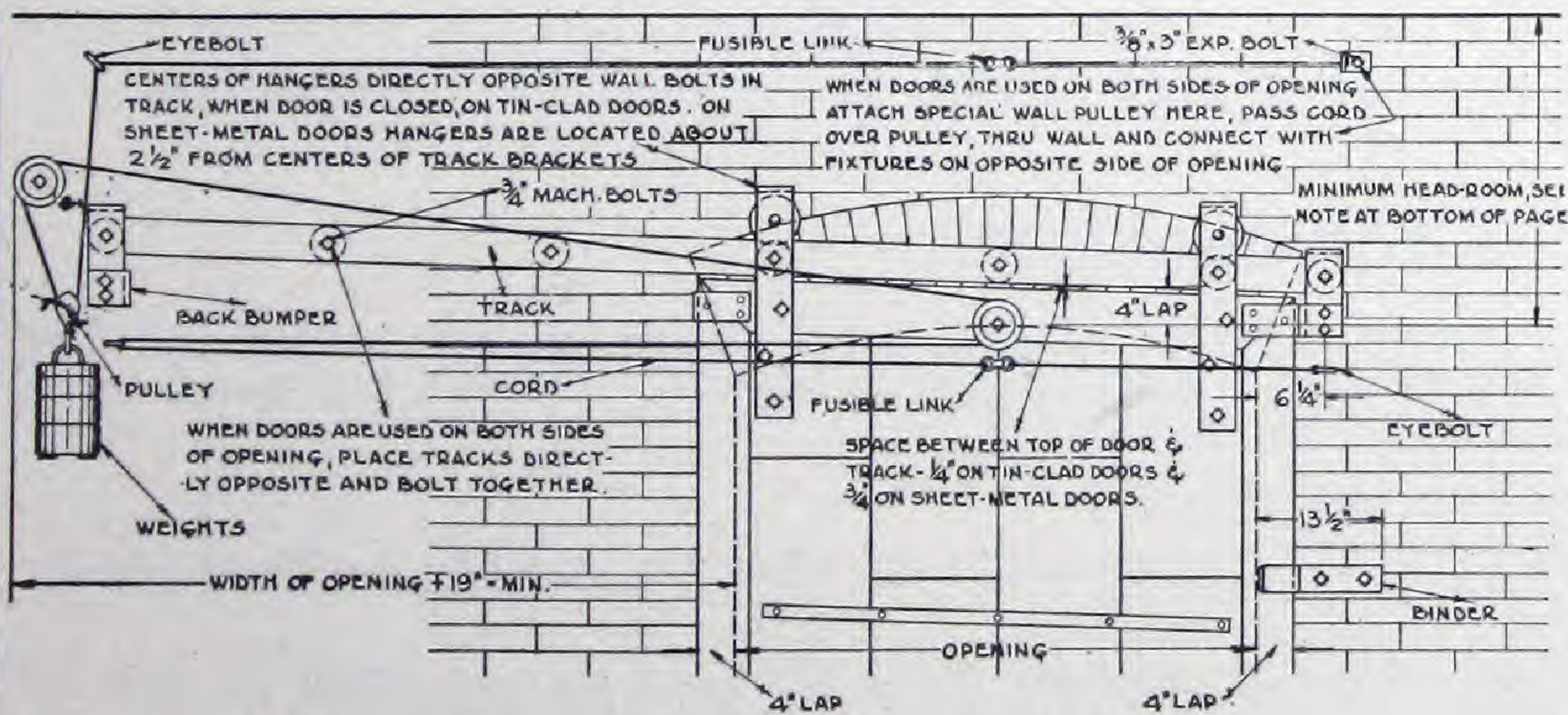
*Wall Bolt not required when No. 102-80 Guide Rollers are used.



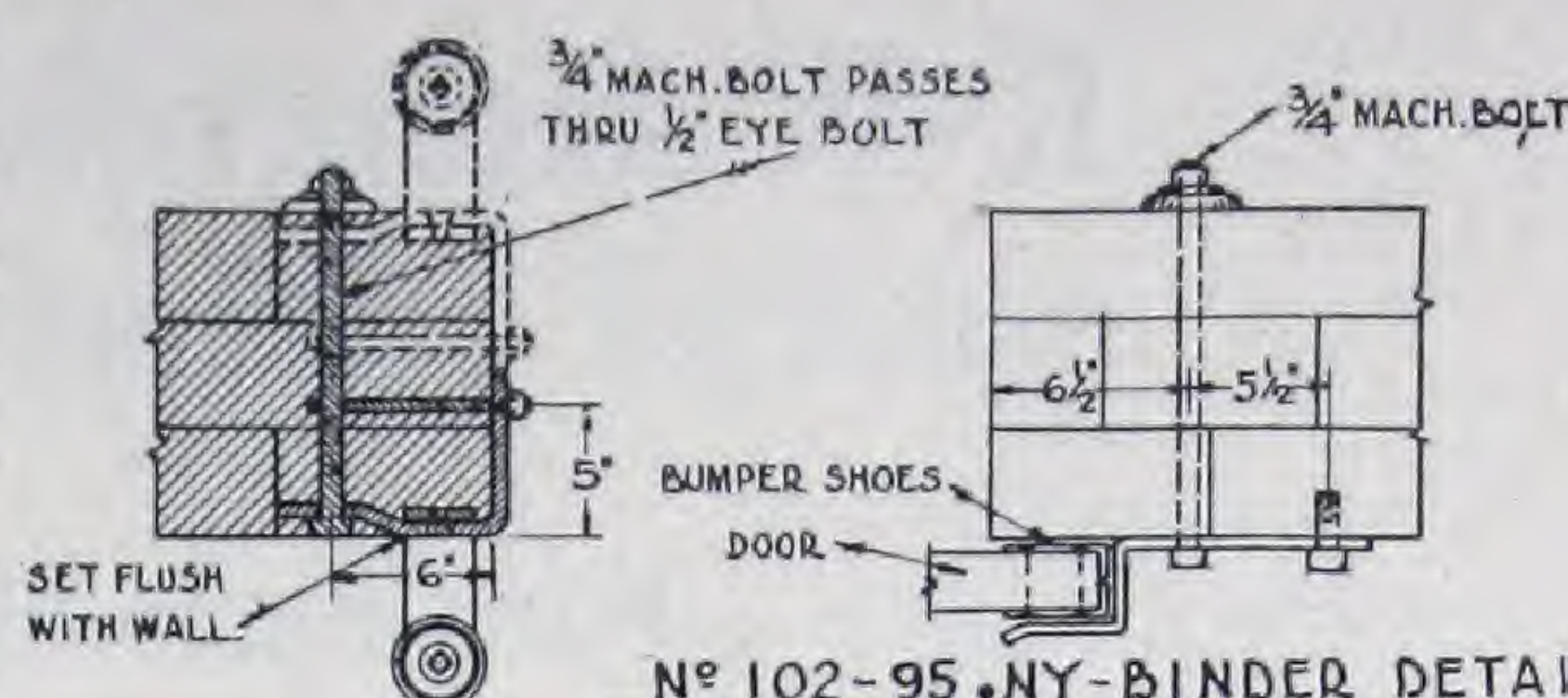
**RICHARDS-WILCOX No. 102 FIRE DOOR FIXTURES
STANDARD STYLE**



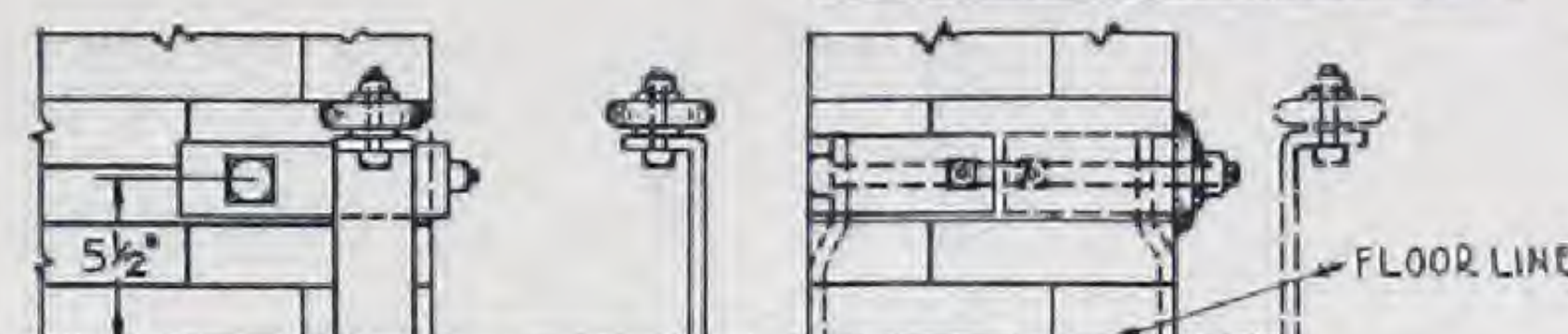
**RICHARDS-WILCOX No. 102 FIRE DOOR FIXTURES
CHICAGO STYLE**



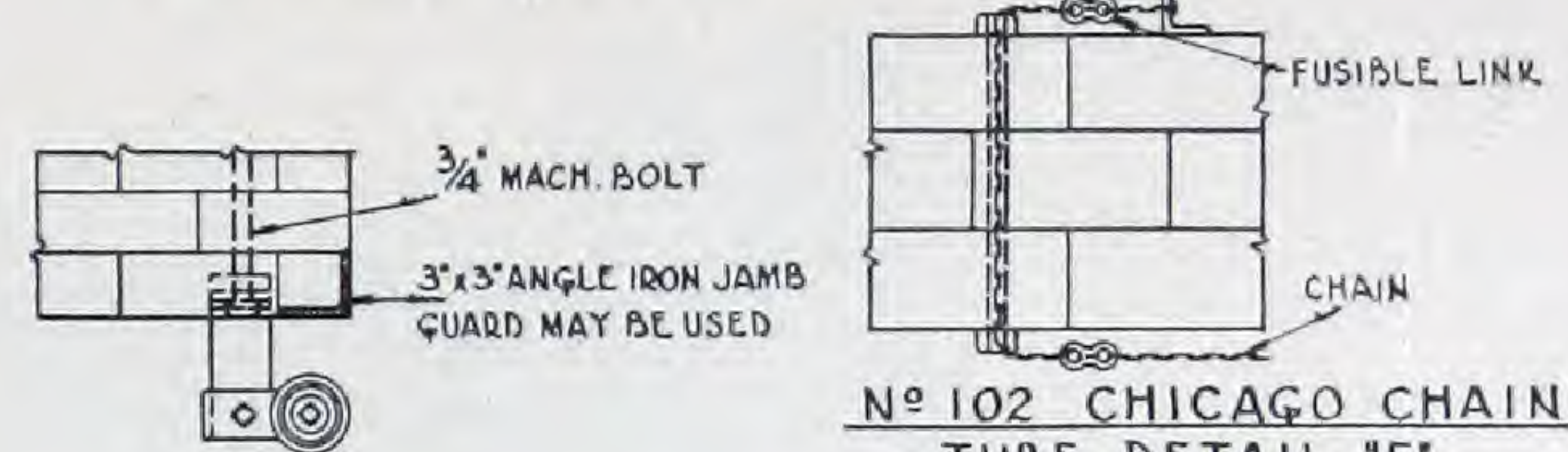
**RICHARDS-WILCOX No. 102 FIRE DOOR FIXTURES
CINCINNATI STYLE**



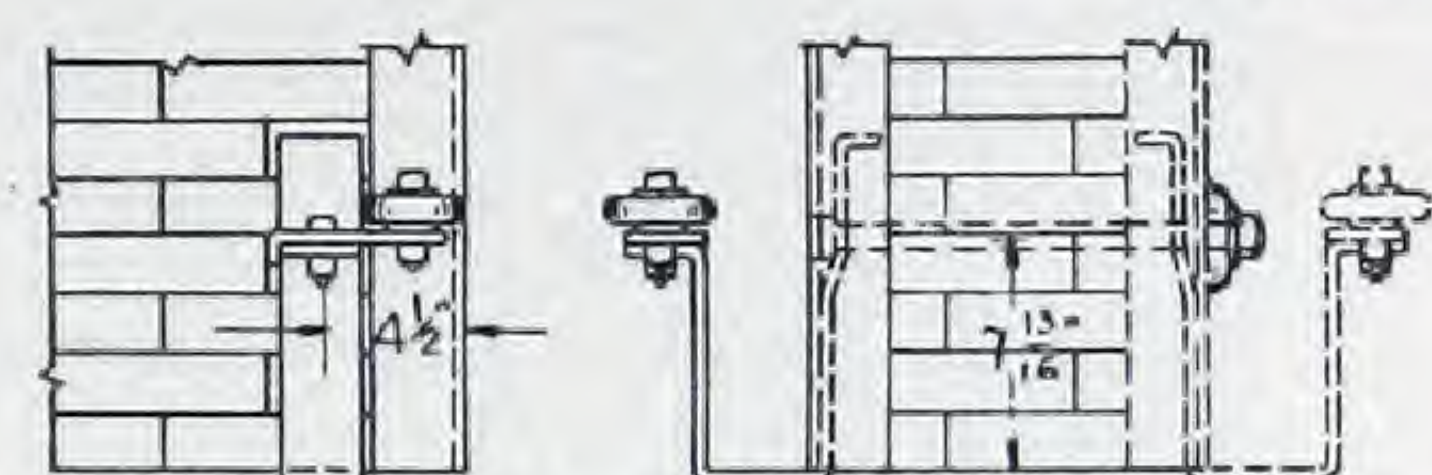
**No. 102-95 NY-BINDER DETAIL
NEW YORK STYLE**



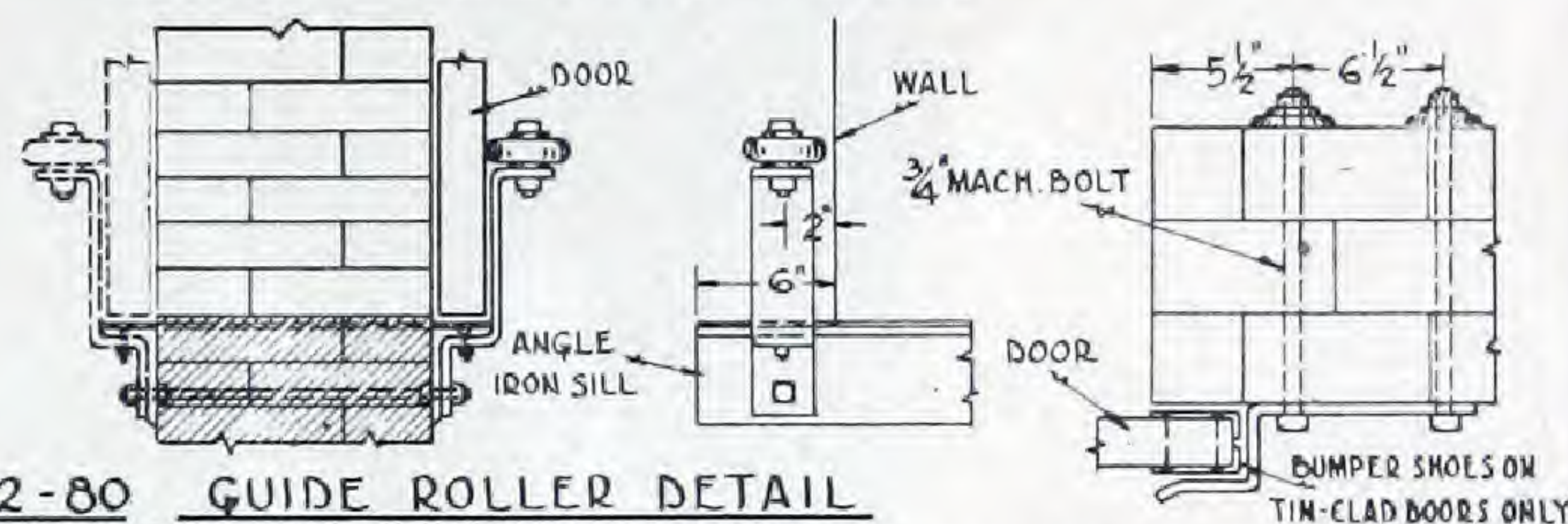
No. 156 GUIDE ROLLER DETAIL
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING



**No. 102 CHICAGO CHAIN
TUBE DETAIL 'F'**

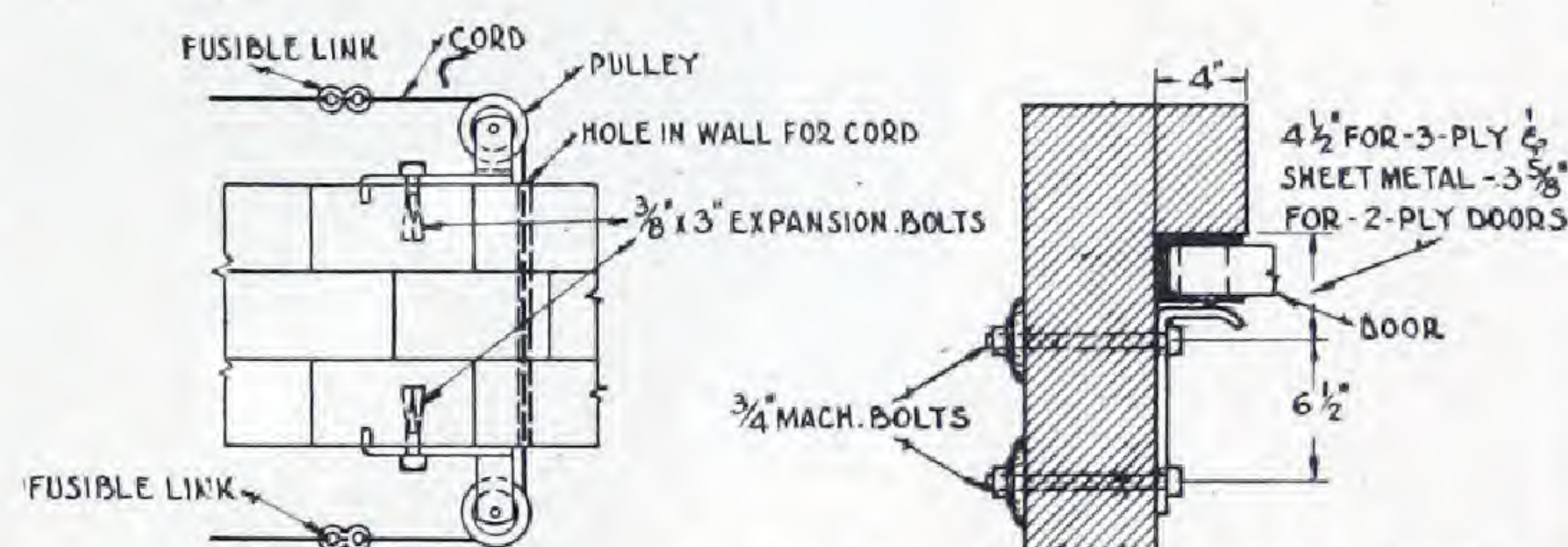


No. 56 BOSTON GUIDE ROLLER DETAIL
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING

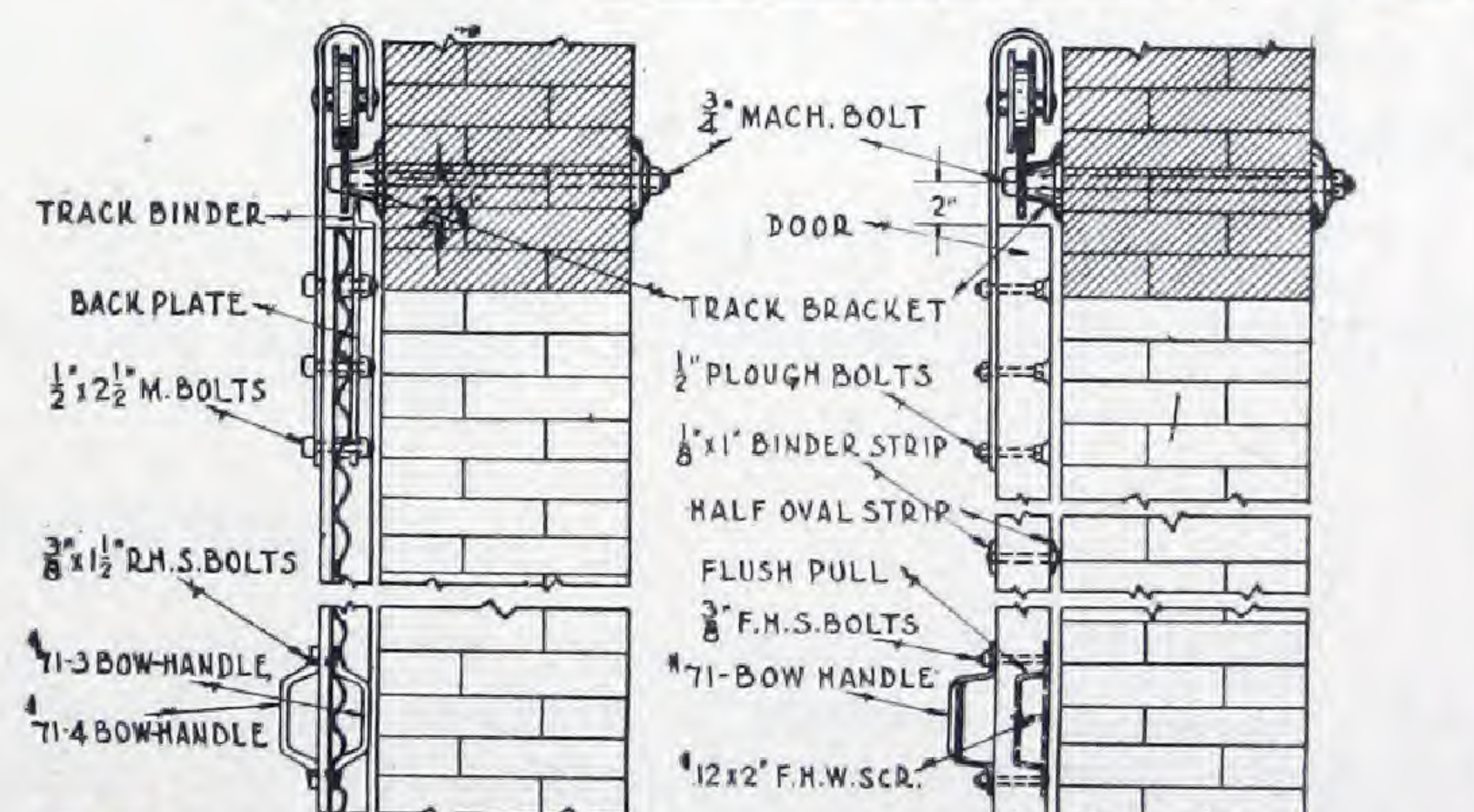


No. 102-80 GUIDE ROLLER DETAIL
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING

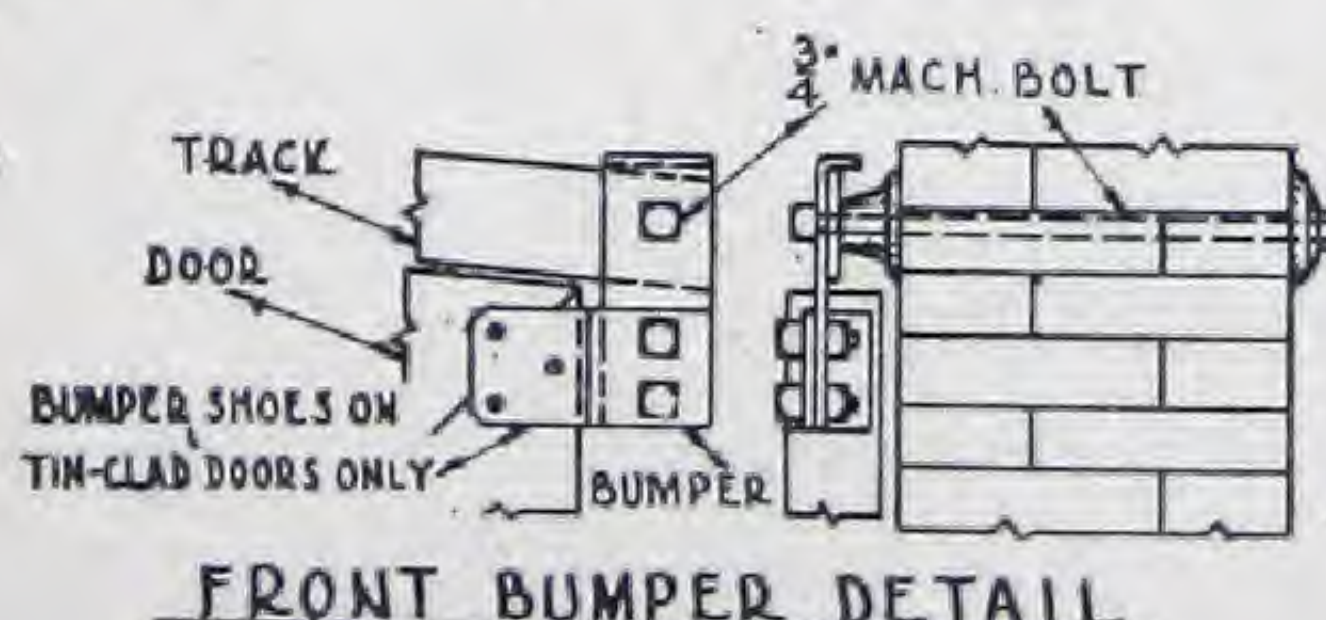
No. 102-95 BINDER DETAIL



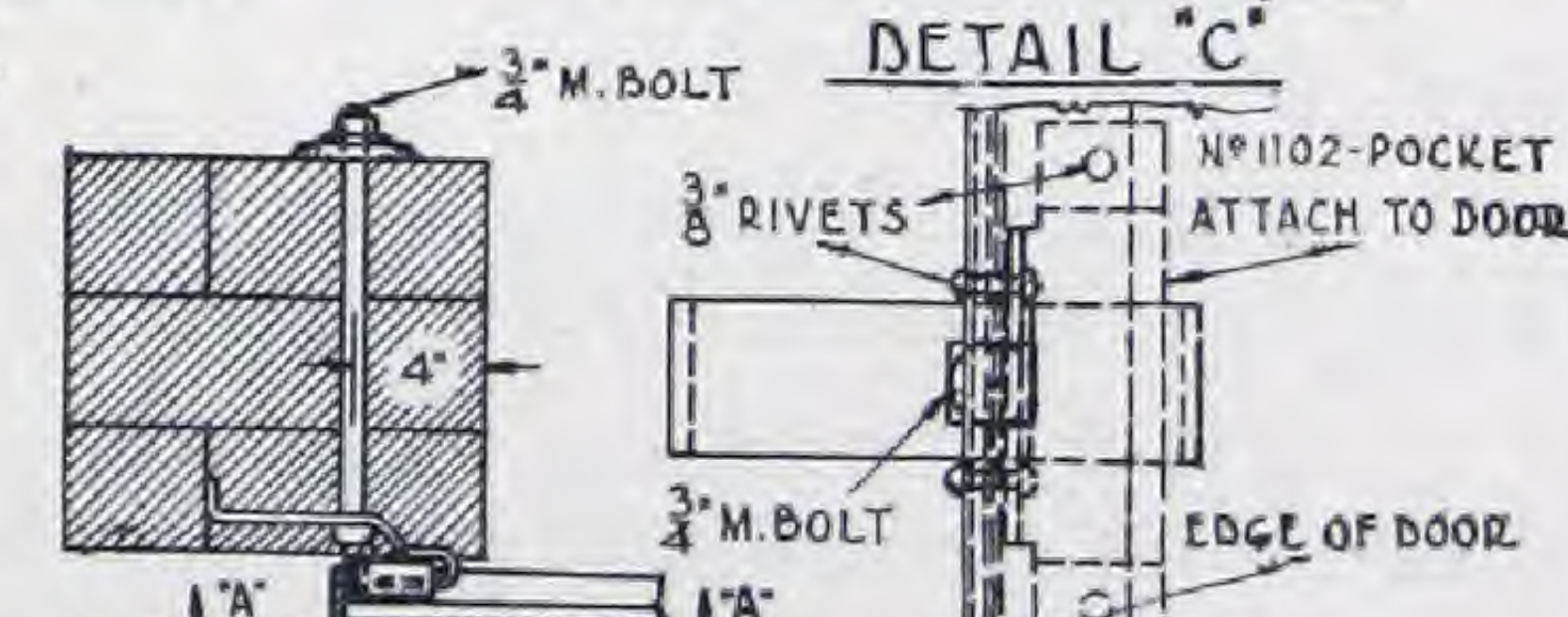
DETAIL 'EE' **No. 102-94 RIGHT ANGLE BINDER**



**SECT. THRU DOOR & WALL
SHEET METAL DOOR** **SECT. THRU DOOR & WALL
TIN-CLAD DOOR**



FRONT BUMPER DETAIL



**REAR BINDER DETAIL
SHEET METAL DOOR** **VIEW AT 'AA'
OF REAR BINDER**

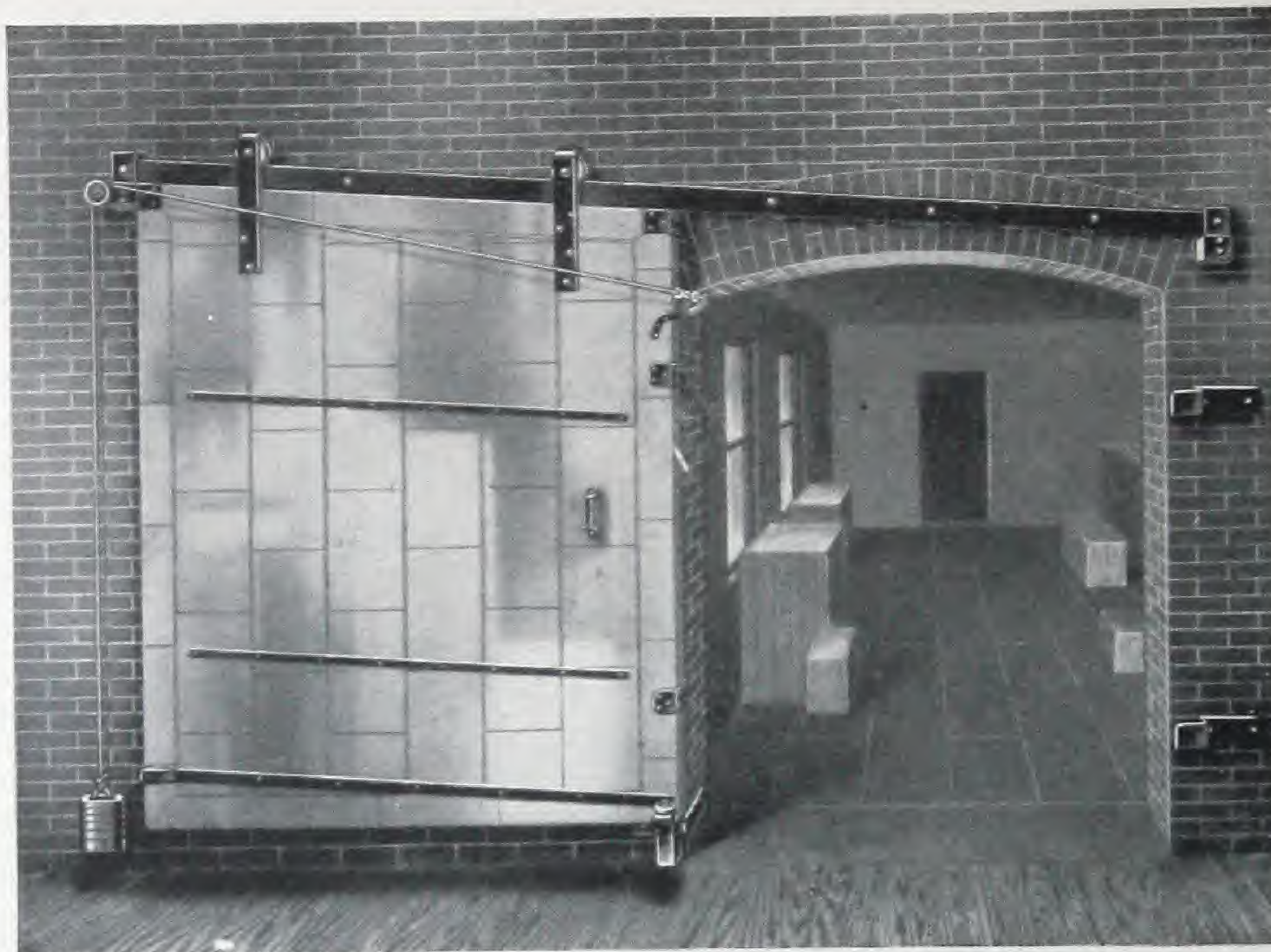
Square top openings require 14" of head-room for Non-Adjustable hangers at edge of opening toward which the door slides in closing, plus 3/4" for each foot of track. Arched top openings require 14" of head-room above the top of arch, plus 3/4" for each foot that track extends beyond the center of opening. Add three inches to the above clearances for adjustable hangers.



R-W Monarch Single Link Flat Track Fire Door Fixtures

For Single Sliding Doors, Incline Track

R-W No. 201-2 For Two-ply (1- $\frac{3}{4}$ inch) Tin Clad Doors.
R-W No. 201-3 For Three-ply (2- $\frac{5}{8}$ inch) Tin Clad Doors.
R-W No. 1201 For "FyeR-Wall" Sheet Metal Doors.



No. 201 Fire Door Fixtures Applied to Tin Clad Fire Door

The above hardware is included in list of Fire Door Hardware approved and labeled by National Board of Fire Underwriters.

This fixture is the same style as No. 102 shown on pages 12-15, except that the overhead cord arrangement is omitted. This type has but one fusible link which is exposed in the opening.

DIRECTIONS FOR ORDERING

STATE: First—Number of openings and number of doors; whether doors are on one side or both sides of wall. If latter, mention if fixtures can be bolted together and state thickness of wall. Do not say doors when you mean openings, as doors must lap four inches on each side and at top.

Second—Width and height of opening, (mention width first).

Third—Thickness of doors, if two-ply tin clad (1 $\frac{3}{4}$ inches), three-ply tin clad (2 $\frac{5}{8}$ inches) or "FyeR-Wall" sheet metal doors.

Fourth—Thickness of wall, when wall bolts are required, or when doors are used on both sides of wall, in which case special U wall plates are required for guide rollers, when walls are less than 12" thick.

Fifth—Distance from edge of opening to walls at right angles, if any. State distances from highest points of openings to nearest obstructions overhead.

Sixth—If opening is square or arched top.

NOTE: Minimum clearances and special automatic closing arrangements are shown on page 19. Unless otherwise specified Standard style will be furnished.

Detail of parts shown on pages 20 and 21. See pages 82-85 for R-W Standard Approved and Labeled Tin-Clad and R-W "FyeR-Wall" sheet metal doors. Approved hardware suitable for Saino and Merchant & Evans doors furnished when required.

Richards-Wilcox Mfg. Co. Aurora, Illinois

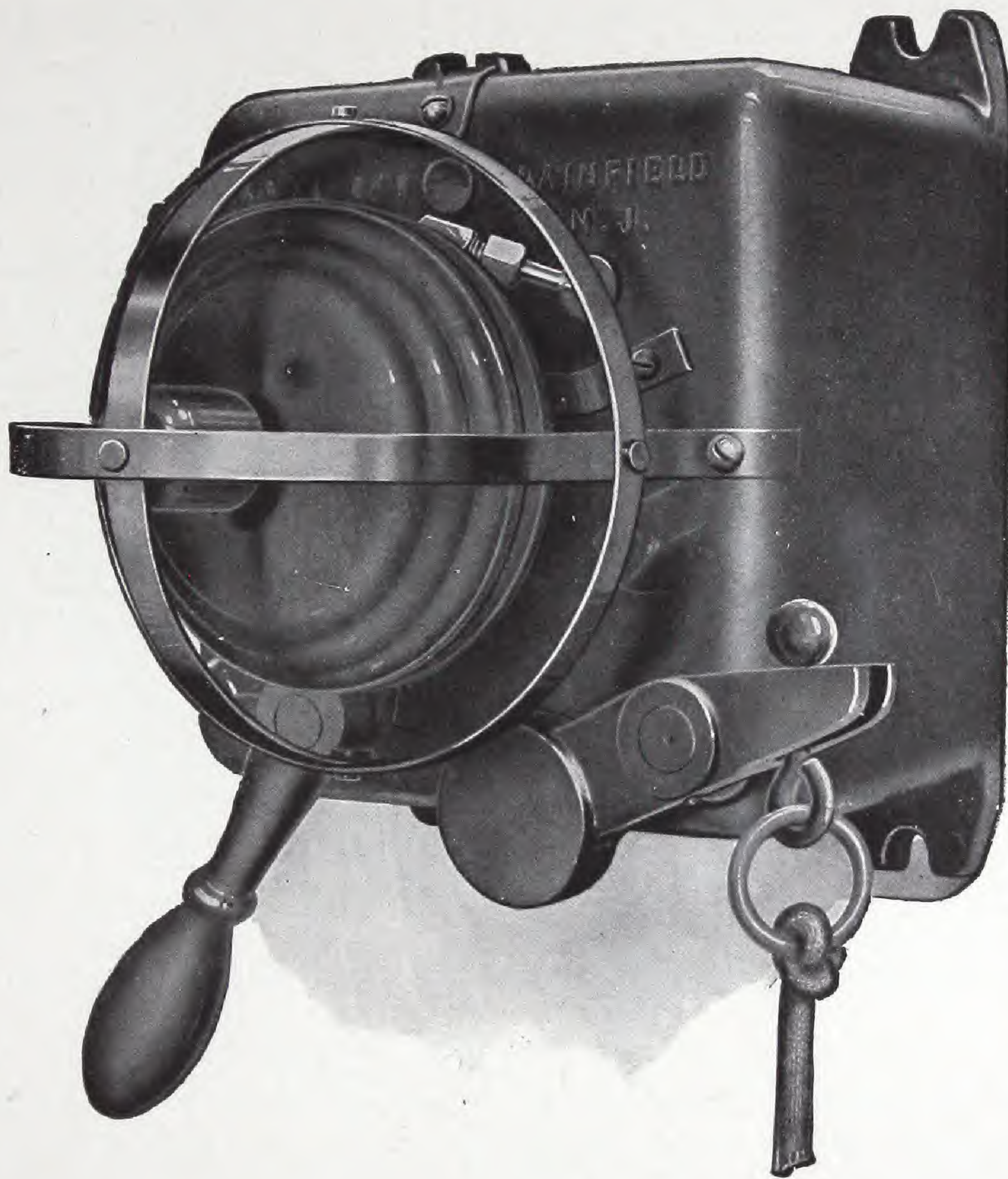
R-W No. 98

Lowe Automatic Fire-Door Release

For the Protection of Openings in Walls and Partitions Against Fire

242

Approved
by the
Underwriters'
Laboratories
as
Quick Operating
and
Heat Actuated



Patented
June 11th, 1918.
Other
Patents Pending.

It gives us great pleasure to be able to offer to our trade the "Rate of Rise" or "Heat Actuated" device known as the Lowe Automatic Fire-Door Release.

We recommend this device as a positive means of automatically releasing all types of Fire Doors as well as Dip Tank Covers, Skylights and Theatre Curtains. It is adapted to many other similar uses.

Fire Door Hardware

Lowe Automatic Fire-Door Release (Cont.)

For the Protection of Openings in Walls and Partitions Against Fire

244

Underwriters' Laboratories
INCORPORATED 1901
ESTABLISHED AND MAINTAINED BY THE
National Board of Fire Underwriters
FOR SERVICE - NOT PROFIT
207 EAST OHIO STREET, CHICAGO

Guide No. 120 ID8. February 6, 1923—Laboratories' File R826.

Ohio Automatic Sprinkler Co., The, Mfr.,
Youngstown, Ohio.

"Automatic" Sprinkler Co. of America, Submitter,
123 William St., New York, N. Y.

Quick-Operating, Heat-Actuated Device and Door Release.

Lowe Automatic Release. Designed to release automatically one or more fire doors protecting a single opening in a wall; intended especially for use where conditions are such that the spread of fire through the wall opening is likely to be very rapid or is likely seriously to endanger life.

Load at weight release lever not over 50 lb.

STANDARD—Fire and Accident—when installed with proper cord and counterweights.

LABEL SERVICE.

See description of Label Service and Label Illustration on guide card.

Inspection Departments having jurisdiction should be consulted before installation.

This card replaces R826 dated Sept. 1, 1917.

Facsimile of Underwriters' File Card.

What the Automatic Fire-Door Release Is

This is an approved AUTOMATIC FIRE-DOOR RELEASE of a pneumatic compensating type, the mechanism consisting of one or more air chambers, a system of levers and a diaphragm mounted in a metal case. It is positive in its action.

What the Automatic Fire-Door Release Does

The Release operates when the rate of temperature increase is abnormal, as in fire conditions, or at the rate of 15 degrees or more per minute. This minimum rate of 15 degrees was approved as the result of years of public service.

The Release can be readily applied to any Fire-Door, Shutter, or other fire stop or emergency control. By its quickness and positive action it guarantees protection from spread of fire through fire wall openings, which is not possible by fixed temperature devices. This device will release a fire stop from an incipient fire 25 feet distant in less than one minute. This no fixed temperature device can do.

(Note—See Report of Committee on Protection of Openings of Walls and Partitions, May, 1917).

How the Automatic Fire-Door Release Does It

When a rise of temperature equal to 15 degrees or more within one minute occurs, the air in Air Chamber No. 76 expands, exerting pressure on Diaphragm No. 43 through Air Tubing No. 55, pushing out Diaphragm Plunger No. 45. This movement of Plunger disengages Leverage System Nos. 13, 12, 14 and 15, allowing operating Lever Shaft No. 6 to rotate in response to weighted end of same, disengaging Leverage System Nos. 3 and 4 and Release Operating Lever Shaft No. 10, which releases Cord Ring No. 41 to which fire opening control is attached.

To Reset the Automatic Fire-Door Release

After the Release has been operated, wait a few minutes for the air in the Air Chamber No. 76 to equalize with the atmosphere by means of Compensating Vent No. 59. Then if Reset Hand Lever No. 7 be raised the Reset Shaft No. 9 and Locking Lever No. 3, which are attached, are thrown into engaged position. Drop Reset Hand Lever No. 7 to its normal position and Cord Ring No. 41 can then be placed in the fork of weighted Release Lever No. 8.

The Compensating Feature of the Automatic Fire-Door Release

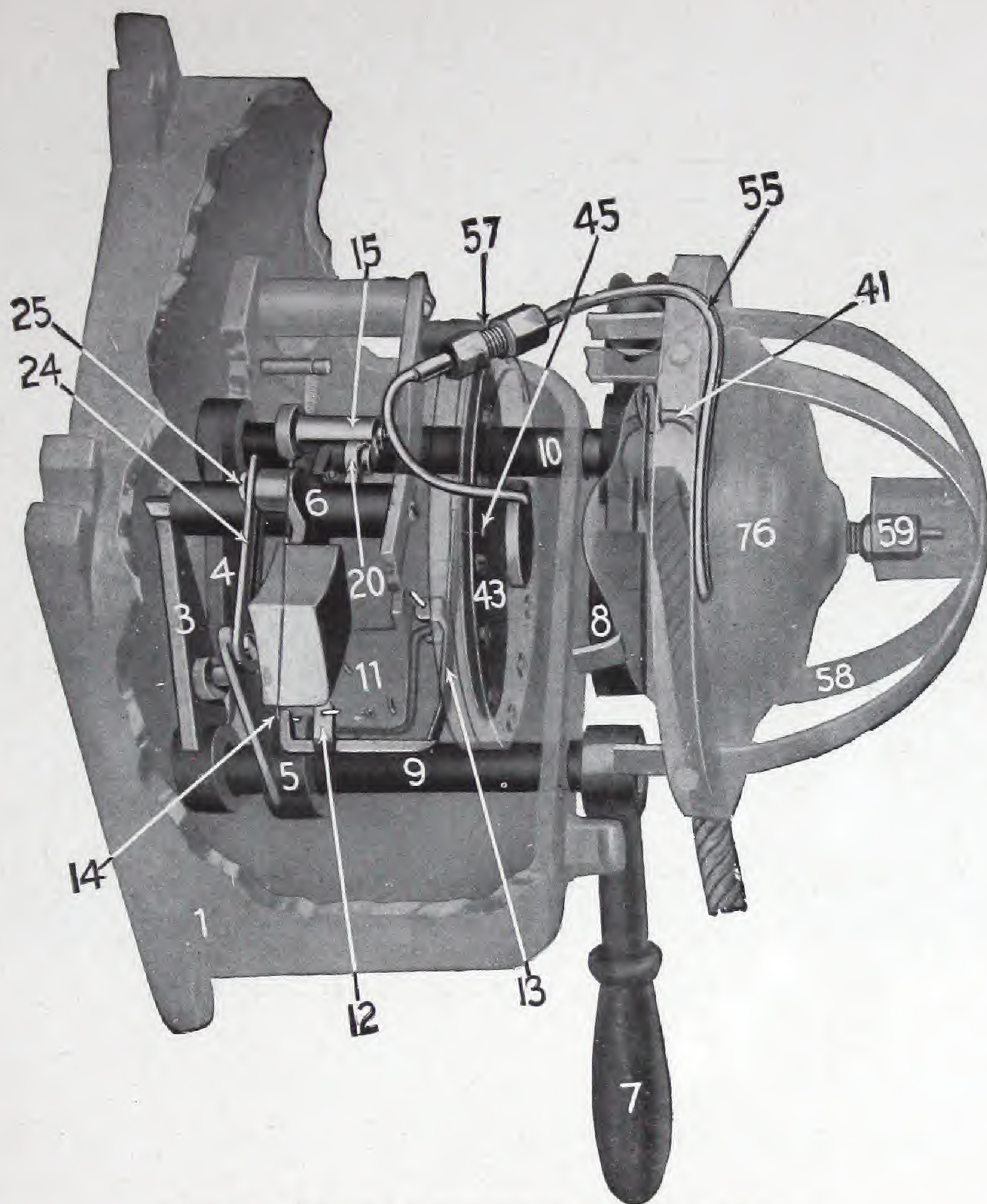
The air in Air Chamber No. 76 is kept at atmospheric pressure under local changes of temperature through the medium of Compensating Vent No. 59, which is calibrated to permit rise in temperature of less than 15 degrees per minute to occur without producing pressure enough in Diaphragm No. 43 to move Plunger No. 45. When rise in temperature of 15 degrees or more per minute takes place, then the pressure in Diaphragm No. 43 builds up beyond relief capacity of Compensating Vent No. 59, causing Release to operate as above described.

"A Hanger for any Door that Slides"

R-W No. 98

Lowé Automatic Fire-Door Release (Cont.)

For the Protection of Openings in Walls and Partitions Against Fire



Type A. With Case Cut Out to Expose Mechanism.

Names and Numbers of Parts as Filed with Underwriters' Laboratories

- | | |
|------------------------------------|--------------------------------|
| 1. Box. | 15. Escapement Lever Ratchet. |
| 3. Locking Lever. | 20. Operating Lever Lock Pawl. |
| 4. Release Operating Lever. | 24. Connecting Link. |
| 5. Reset Operating Lever. | 25. Connecting Link Stud. |
| 6. Operating Lever Shaft. | 41. Cord Ring. |
| 7. Reset Hand Lever. | 43. Diaphragm. |
| 8. Weight Release Lever. | 45. Diaphragm Plunger. |
| 9. Reset Shaft. | 55. Air Tubing. |
| 10. Release Operating Lever Shaft. | 57. Air Tubing Coupling. |
| 11. Diaphragm Base. | 58. Air Chamber Guard. |
| 12. Escapement Fulcrum Lever. | 59. Vent. |
| 13. Escapement Operating Lever. | 76. Air Chamber. |
| 14. Escapement Lever. | |

List Price

Outfit Complete, with instructions.....\$24.00

Approximate Shipping Weight, 23 lbs. (No Fire-Door or Hardware Included.)

Discount.....

Fire Door Hardware

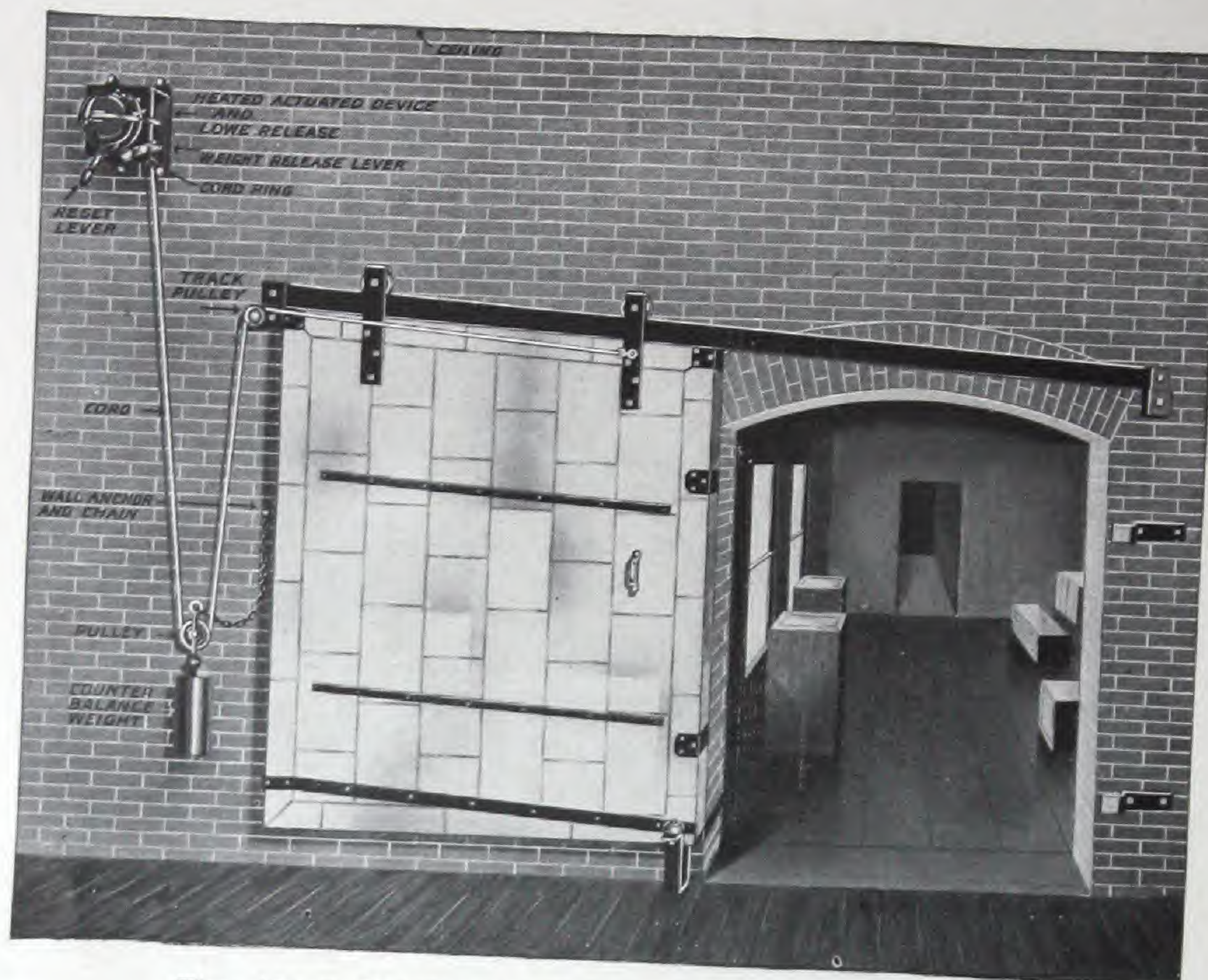
"A Hanger for any Door that Slides"

R-W No. 98

Lowe Automatic Fire-Door Release (Cont.)

For the Protection of Openings in Walls and Partitions Against Fire

Approved
by the
Underwriters'
Laboratories
as
Quick Operating
and
Heat Actuated



The Above Illustration Shows Details of Installation.

Patented
June 11th, 1918
Other
Patents
Pending

Below is given a reprint of Rule 14 of the Regulations of the National Board of Fire Underwriters:

RULE 14—AUTOMATIC DOORS

"(a) Where the conditions are such that the spread of fire through the wall openings is likely to be very rapid, or where the spread of fire through wall openings is likely to seriously endanger life, the fire doors should be operated by an approved automatic quick-operating door closing device or system.

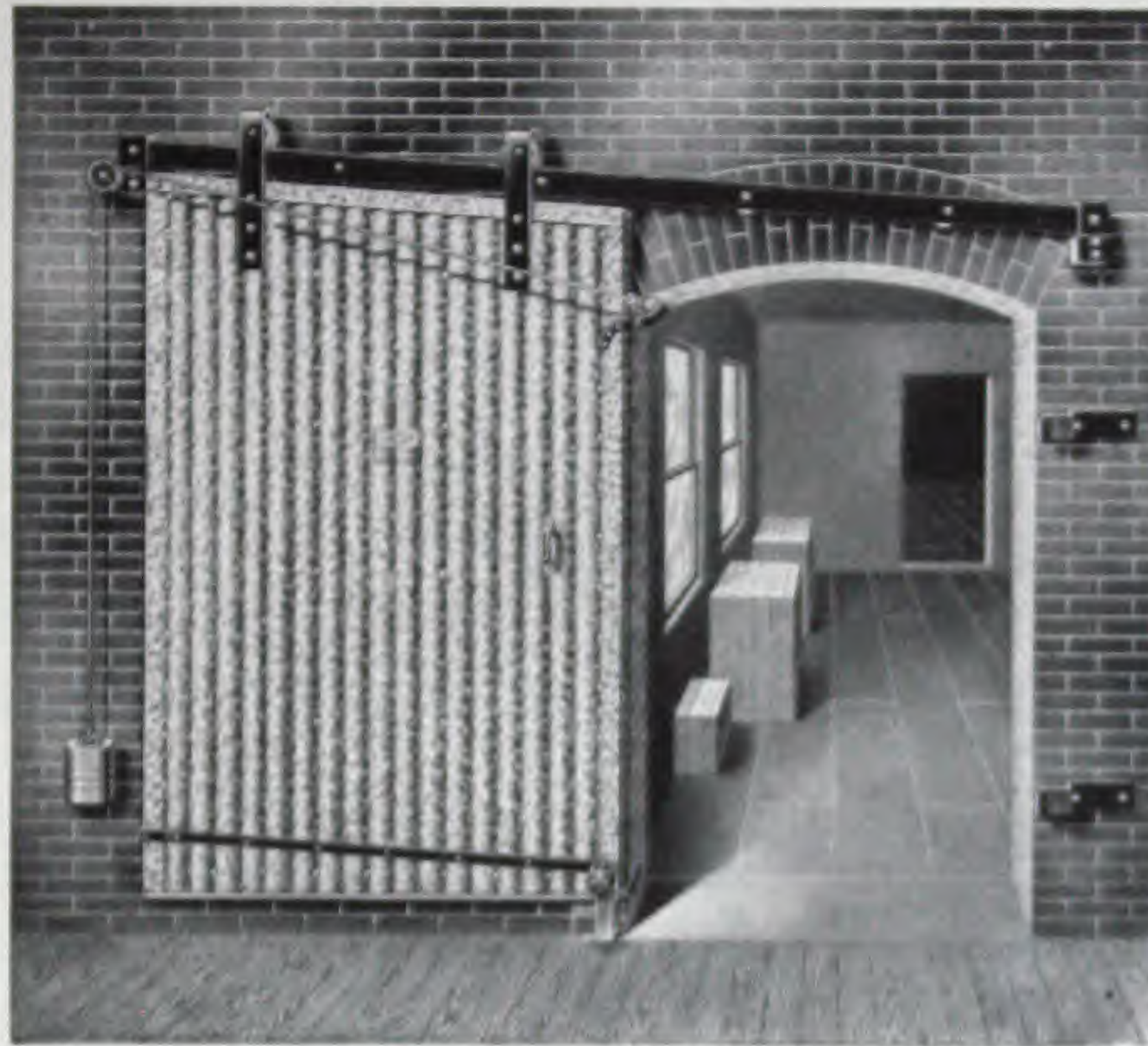
"(b) Where the conditions are such that the possibility of the very rapid spread of fire through the wall openings is small, and where the spread of fire through such openings is not likely to seriously endanger life, the fire doors may be operated by a less sensitive approved automatic door closing device, or system such as the fusible link type.

"NOTE: It should be noted that the question is not so much that of rise of temperature as of rapidity of spread, and that in all situations where a very rapidly spreading fire appears likely, the sensitive device should be used. Such situations include those where there is a liability of a train of flammable material leading through the opening, or where highly flammable material is present on each side of the opening in such close proximity to it that fire could pass through the opening before generating sufficient heat to operate the less sensitive door closing device."

Words italicized by us.

Fire Door Hardware

R-W Single Link Flat Track Fire Door Fixtures



No. 1201 Fire Door Fixtures Applied to "Eye-R-Wall" Sheet Metal Door

List Price For Nos. 201-2, 201-3 and 1201 Fire Door Fixtures.

Price list includes non-adjustable hangers, track and fixtures complete for doors when used on one side of wall only. If doors are to be used on both sides of wall, double sets will be required and the price will be doubled. Fixtures packed complete with all bolts and screws for attaching parts to door, heavy cast washers for wall bolts and necessary counter-balance weights. Weights are furnished regularly for openings 8' high. If opening is higher, additional weights are required.

Wall bolts are not included, but will be furnished at moderate price if thickness of wall is given.

Width of Opening with 1 pr. Hangers	List Price	Weight per Set, Lbs.	*Width of Opening with 1½ pr. Hangers	List Price	Weight per Set, Lbs.
3 feet	\$17.70	165	6½ feet	\$22.40	232
3½ feet	18.05	170	7 feet	22.70	238
4 feet	18.40	176	7½ feet	23.00	247
4½ feet	18.70	183	8 feet	23.40	258
5 feet	19.05	191	8½ feet	23.70	268
5½ feet	19.40	202	9 feet	24.00	276
6 feet	19.70	208	9½ feet	24.40	282
			10 feet	24.70	292

No. 201-2, 201-3 or 1201 Automatics only, weight 25 lbs. Per set	\$ 3.50
No. 201-2, 201-3 or No. 1201 Fixtures only, less hangers, track and brackets; binder, chafe and guide roll strips, weight 84 lbs. Per set.....	10.70
No. 102-84 Track only, with brackets, weight 4½ lbs. Per foot .....	.40
(Length of track equals twice width of opening, plus 21")	
No. 102-2 Hangers only, used with No. 201-2 Hardware, (page 52), weight 30 pounds. Per pair.....	4.10
No. 102-3 Hangers only, used with 201-3 Hardware, (page 52), weight 30 lbs. Per pair.....	4.10
No. 1102 Hangers with Back Plates, used with No. 1201 Hardware, (page 52), weight 35 lbs. Per pair...	4.10
No. 202 Adjustable Hangers only, (page 52) weight 36 lbs. Per pair	7.00

*For openings (not doors) over 6' wide, Underwriters require three hangers.

Discount.....

Packing List for R-W No. 201-2, No. 201-3 and No. 1201 Fire Door Fixtures —Standard Style.

201-2	201-3	1201	DESCRIPTION	List Price
1	..	..	No. 70-1 Flush Handle, each.....	\$.20
..	1	..	No. 70-2 Flush Handle, each.....	.25
1	..	..	No. 71-1 Bow Handle, each.....	.10
..	1	..	No. 71-2 Bow Handle, each.....	.15
..	..	1	No. 71-3 Bow Handle, each.....	.20
..	..	1	No. 71-4 Bow Handle, each.....	.25
*	*	*	No. 102-SC Sash Cord. (As required), per foot.....	.05
1 Pr.	..	..	No. 102-2 Hangers. (Openings over 6' wide require 1½ pair), per pair	4.10
*	1 Pr.	..	No. 102-3 Hangers. (Openings over 6' wide require 1½ pair), per pair	4.10
..	*	*	No. 102-61 Cast Washers. (See table below). Not required when doors are used on both sides of wall, each.....	.15
8	8	..	No. 102-72 Bumper Shoes, each.....	.10
1	..	..	No. 102-80-2 Guide Roller. (For Angle Iron Sills Only), each.....	2.00
..	1	1	No. 102-80-3 Guide Roller. (For Angle Iron Sills Only), each.....	2.00
2	2	..	No. 102-82 Binder Strips. Length equals width of opening less 4", each.....	.40
1 Run	1 Run	1 Run	No. 102-84 Track Length equals twice width of opening plus 21", per foot.....	.40
*	*	*	No. 102-85 Brackets. (See table below), each.....	.20
1	1	1	No. 102-87 Front Bumper, each.....	1.00
1	1	1	No. 102-88 Guide Roll Strip. Length equals width of opening plus 3" (plus 6" for No. 1201), each.....	.80
2	2	..	No. 102-89 Chafe Strips. Length equals width of opening less 4", each.....	.40
1	1	1	No. 102-91 Weight Holder, each.....	.15
2	..	..	No. 102-95-2 Binders, each.....	.80
..	2	2	No. 102-95-3 Binders, each.....	.80
1	1	1	No. 102-97 Link Bracket with No. 96 Fusible Link Attached, complete	.55
1	1	1	No. 102-98 Wedge, each.....	.10
*	*	*	No. 102-99 No. 1 Lightweight. (According to size of Opening), each	.25
*	*	*	No. 102-99 No. 2 Heavyweights. (According to size of opening), each	.75
1	..	..	†No. 156-2 Guide Roller. (Omit for Angle Iron Sills), each.....	2.00
..	1	1	*No. 156-3 Guide Roller. (Omit for Angle Iron Sills), each.....	2.00
1	1	1	No. 201-86 Rope Pulley and Back Bumper, complete.....	1.50
..	..	1 Pr.	No. 1102 Hangers, with backplates. (Openings over 6' wide require 1½ pr.) Per pair.....	4.10
..	..	1	No. 1102-93 Rear Binder Pocket, each.....	1.00
..	..	1	No. 1102-94 Rear Binder Hook, each.....	.80
1	1	1	Package Screws and Bolts	

Discount.....

†No. 56-2 Boston Guide Roller may be substituted for item listed above if desired.

*No. 56-3 Boston Guide Roller may be substituted for item listed above if desired.

Table of No. 102-85 Brackets and No. 102-61 Cast Washers for above Fixtures.

Width of Opening	Number of Brackets	*Number of Washers
2' 0" to 4' 8"	5	10
4' 9" to 5' 2"	6	11
5' 3" to 7' 8"	7	12
7' 9" to 8' 8"	9	14
8' 9" to 11' 8"	10	15
11' 9" to 13' 0"	11	16
	Fixtures Only Require	5

*No. 1201 Fixtures require one more washer than shown above.

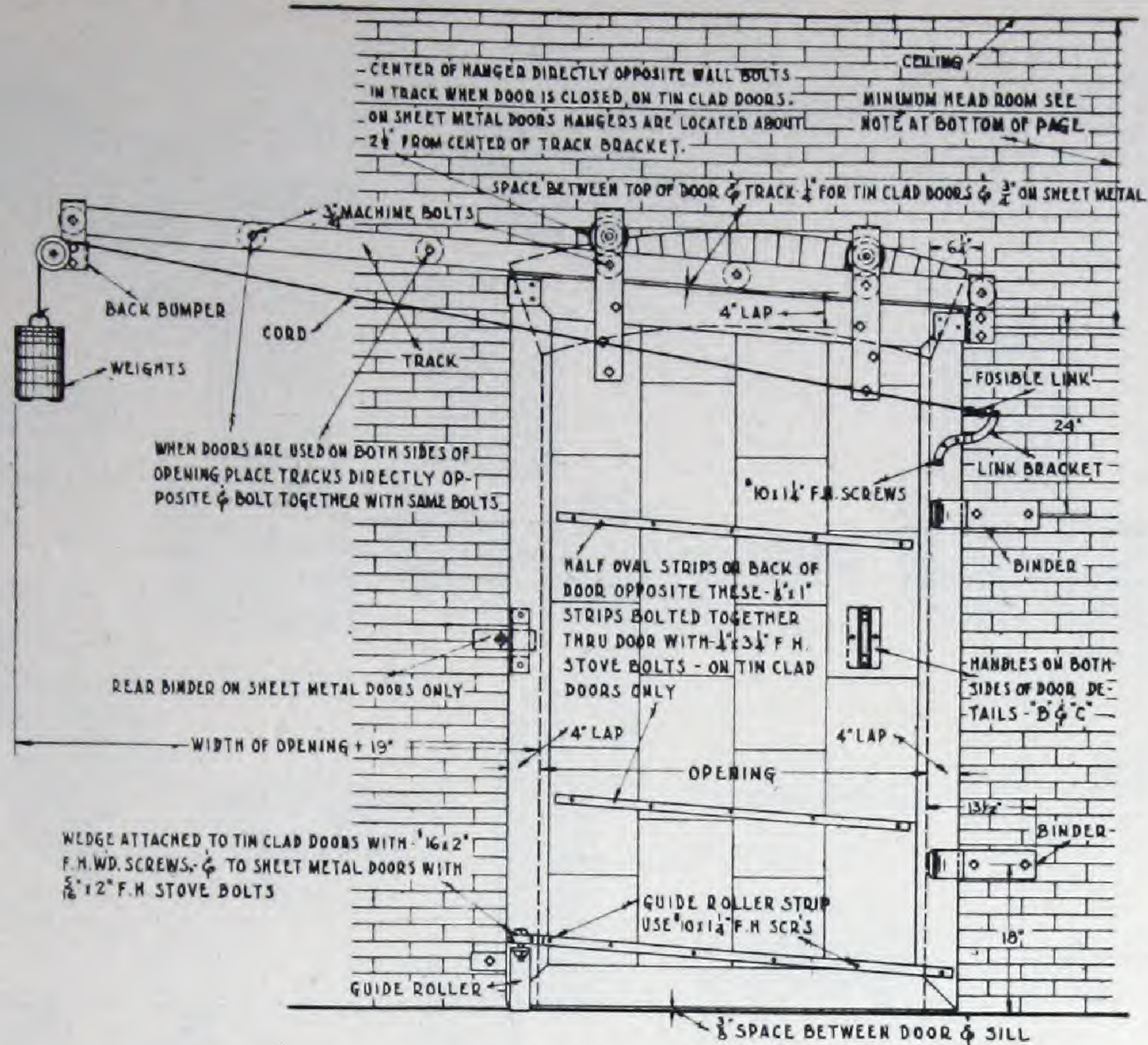
Wall Bolt List for Nos. 201-2, 201-3 and 1201 Fire Door Fixtures

Wall Bolts are not furnished with sets of fixtures regularly, but will be furnished at prevailing market prices when thickness of wall is given and customer requests them. The table below gives the number and size of bolts required for various sized openings. Note that the number of bolts is the same for hardware installed on one or both sides of wall.

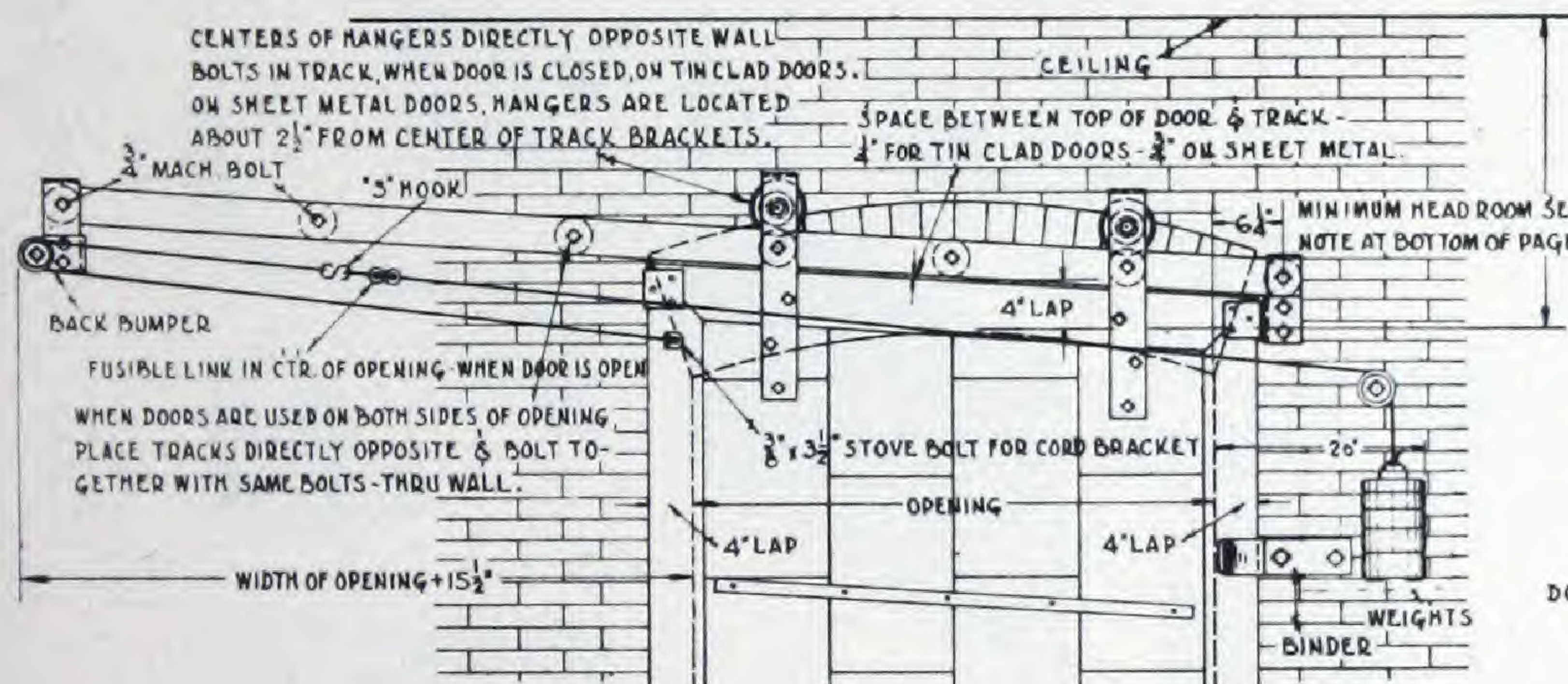
NUMBER OF ¾" BOLTS REQUIRED FOR VARYING WIDTHS OF DOORWAY OPENINGS

Fixtures bolts are used to fasten.....	LENGTH OF BOLTS REQUIRED FOR SETS INSTALLED					
	Opening 2' wide to 4' 8"	Opening 4' 9" to 5' 2"	Opening 5' 3" to 7' 8"	Opening 7' 9" to 8' 8"	Opening 8' 9" to 11' 8"	Opening 11' 9" to 13' 0"
Binders.....	4	4	4	4	4	4
*Guide Rollers.....	1	1	1	1	1	1
End Track Brackets.....	2	2	2	2	2	2
Center Track Brackets.....	3	4	5	7	8	9
Rear Binder Hook (in No. 1201 set only).....	1	1	1	1	1	1
Total Bolts in No. 201-2 and No. 201-3 sets.....	10	11	12	14	15	16
Total Bolts in No. 1201 sets.....	11	12	13	15	16	17

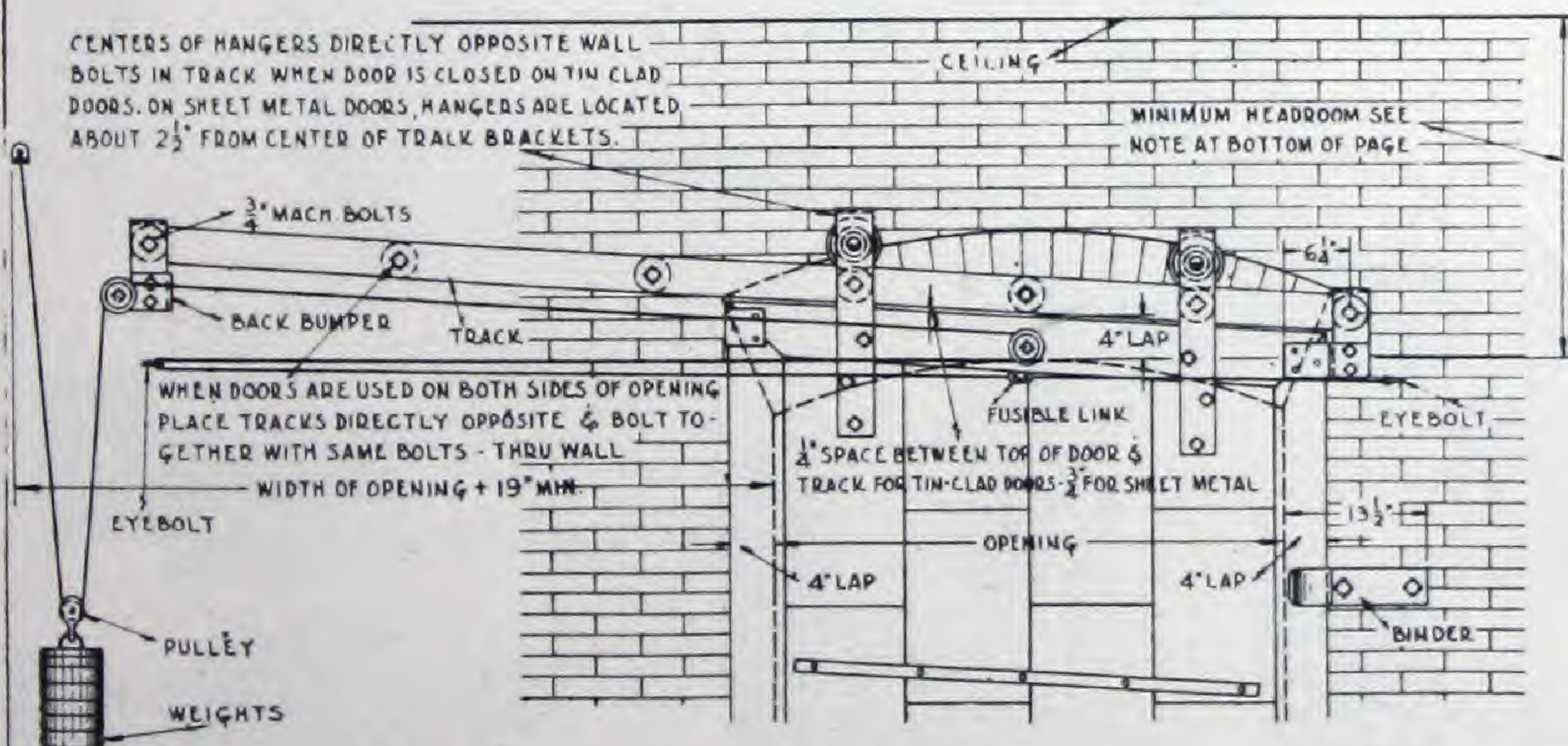
*Wall Bolt not required when No. 102-80 Guide Rollers are used.



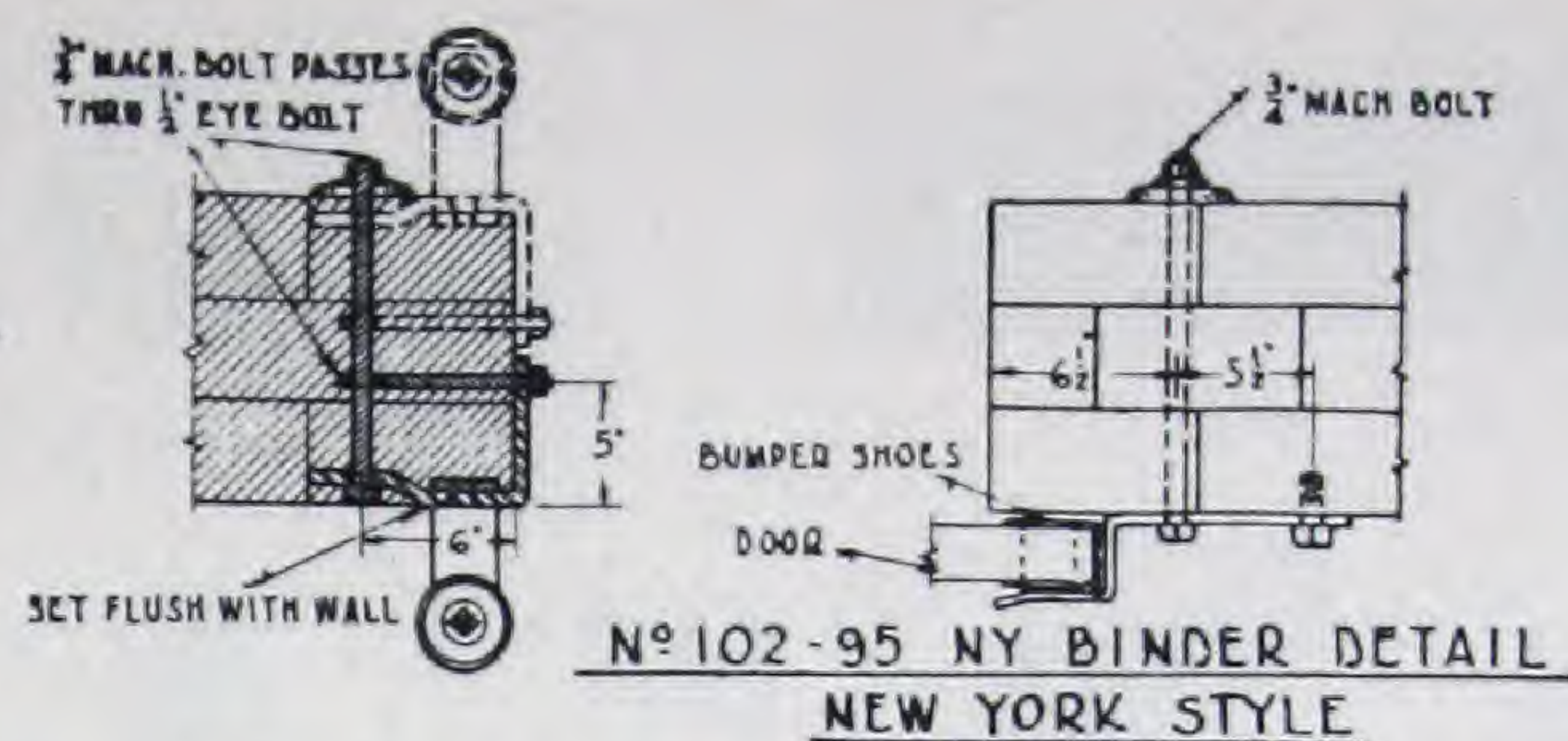
**RICHARDS-WILCOX No 201 FIRE DOOR FIXTURES
STANDARD STYLE**



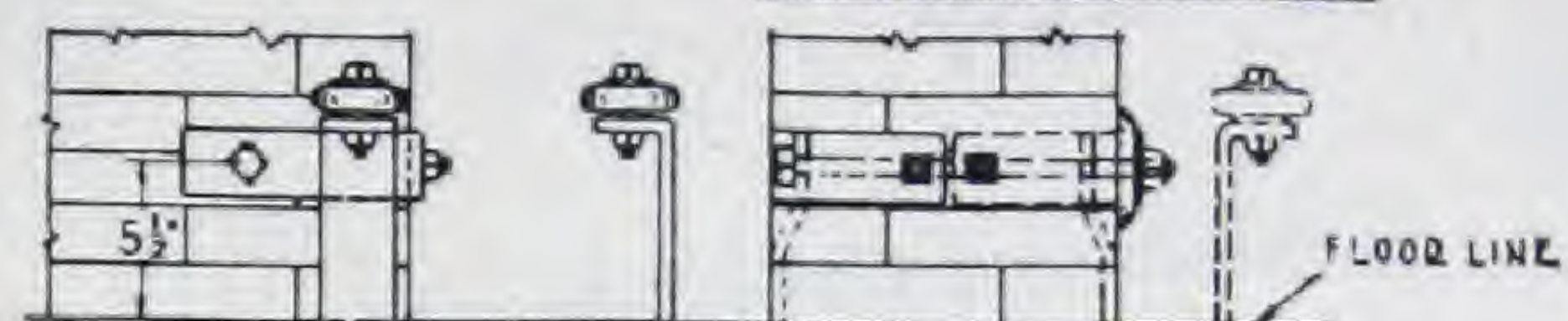
**RICHARDS-WILCOX No 201 FIRE DOOR FIXTURES
CHICAGO STYLE**



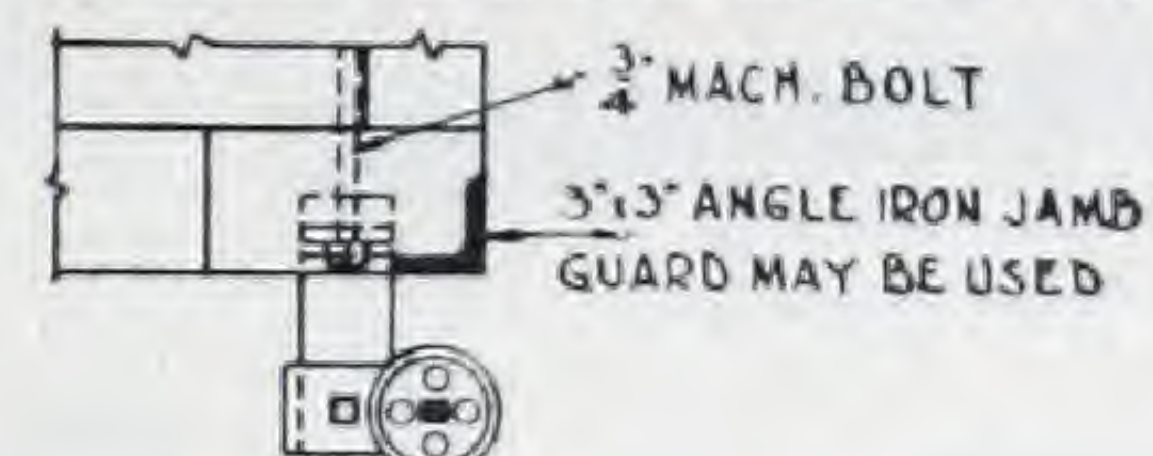
**RICHARDS-WILCOX No 201 FIRE DOOR FIXTURES
CINCINNATI STYLE**



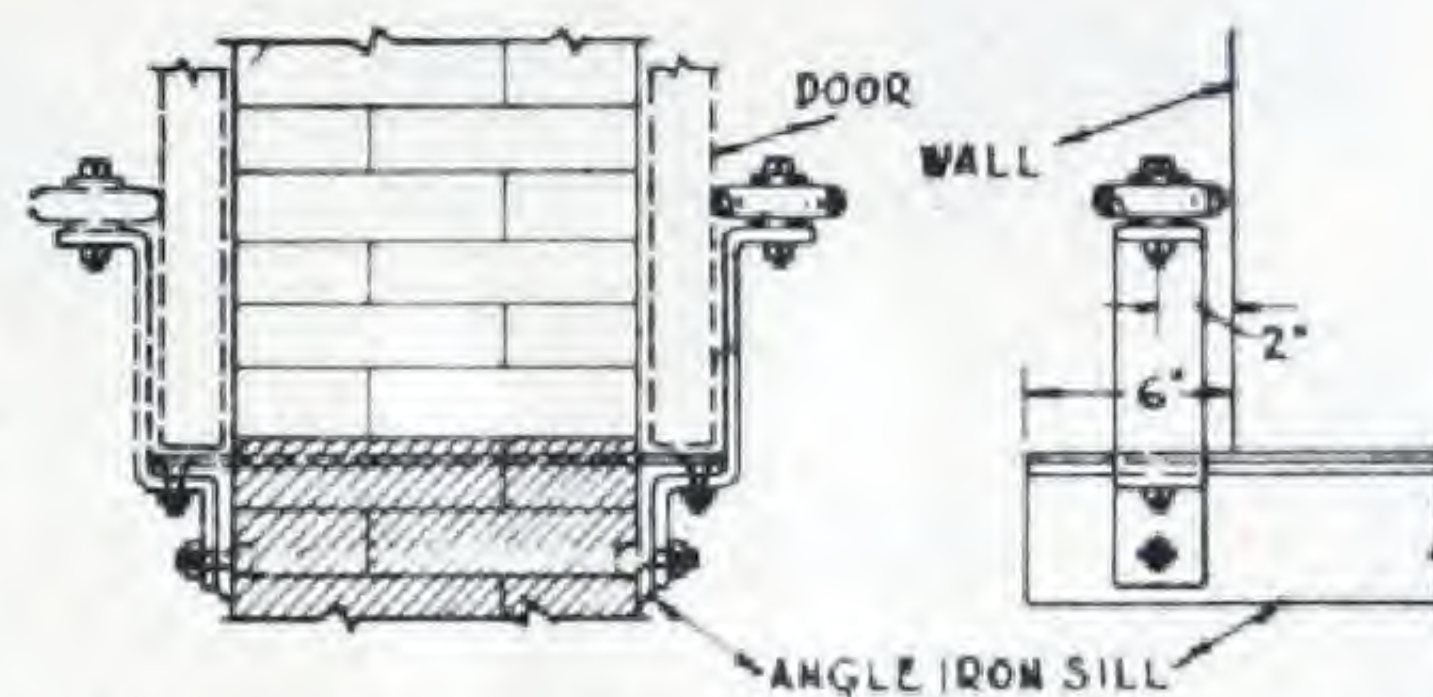
**No 102-95 NY BINDER DETAIL
NEW YORK STYLE**



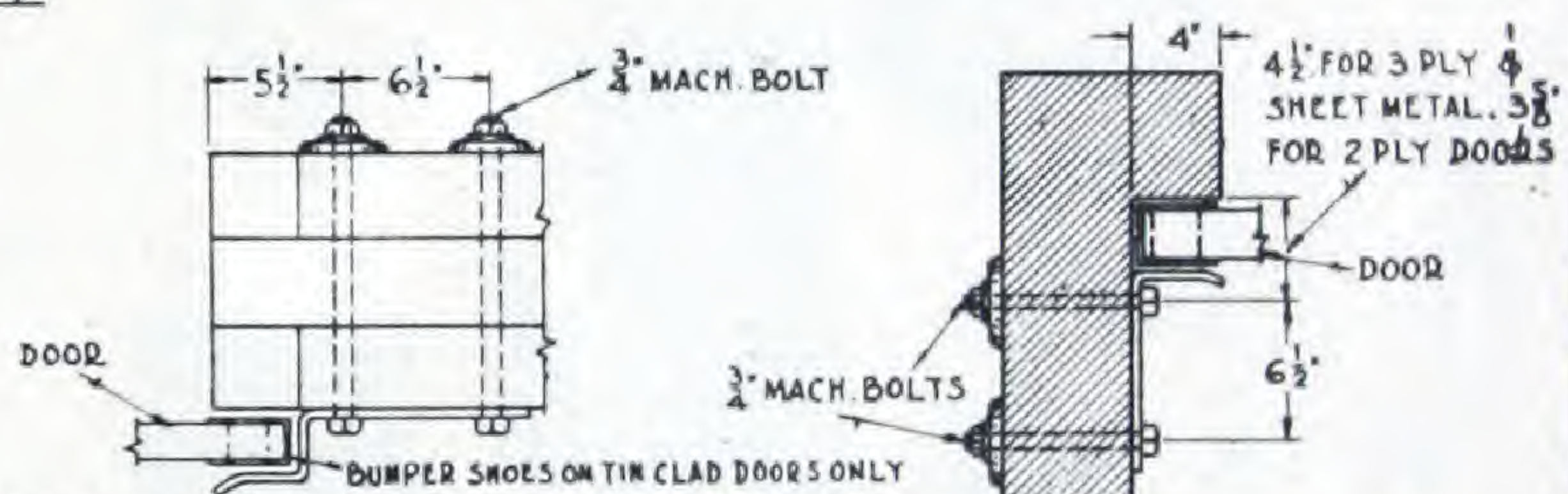
**No 156 GUIDE ROLLER DETAILS
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING**



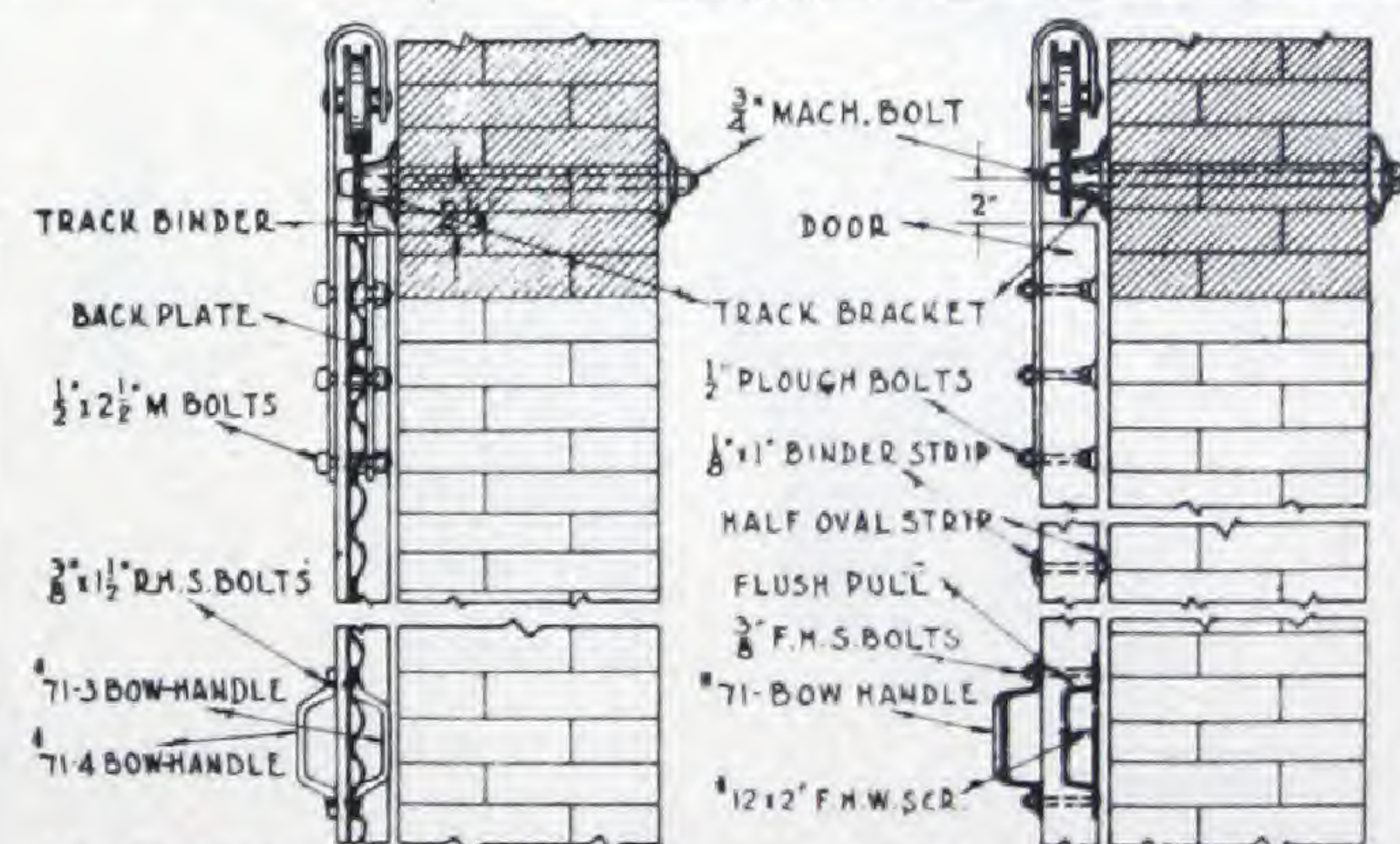
**No 56 BOSTON GUIDE ROLLER DETAIL
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING**



**No 102-80 GUIDE ROLLER DETAIL
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING**

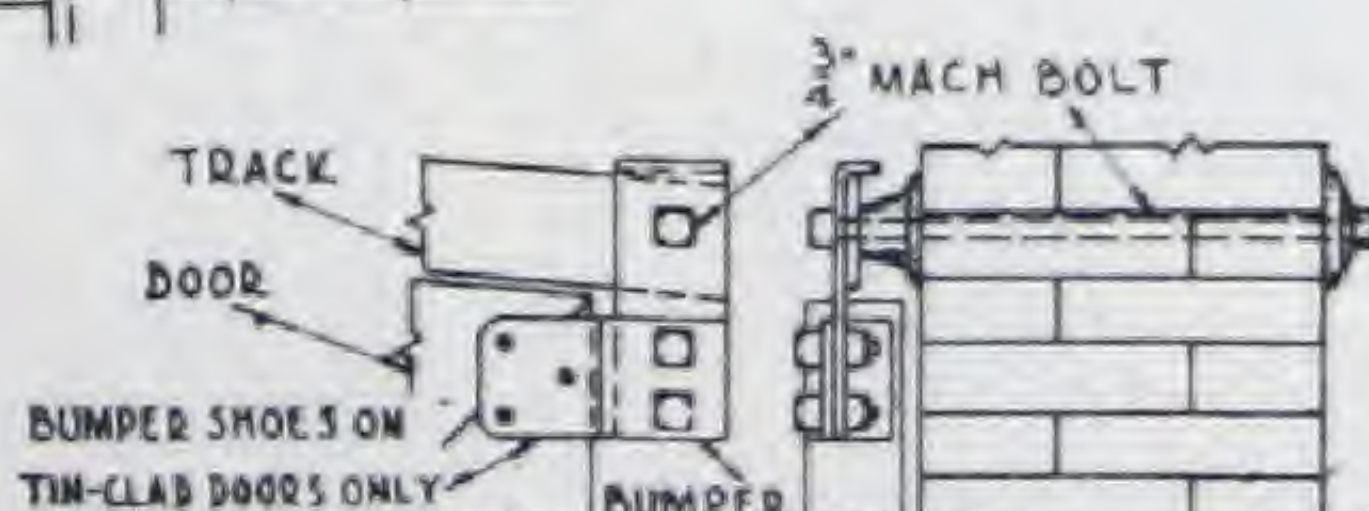


No 102-95 BINDER DETAIL No 102-94 RIGHT ANGLE BINDER

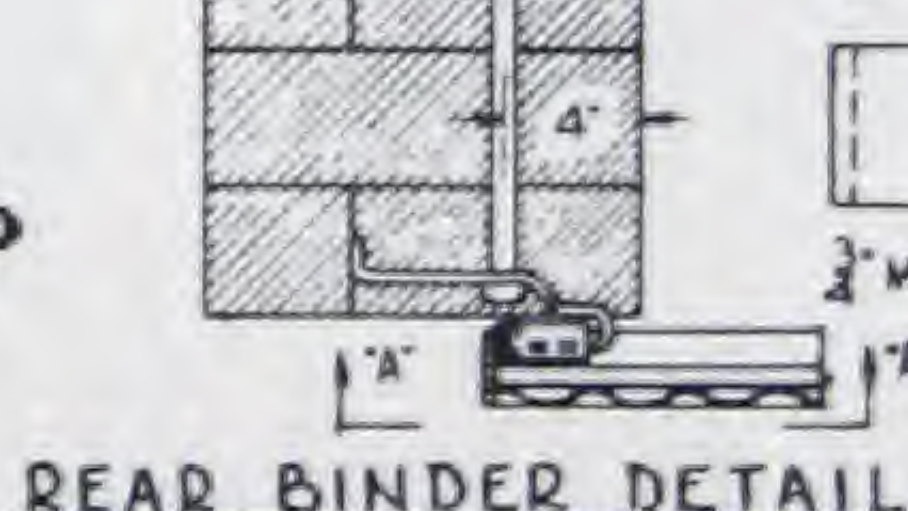


**SECT. THRU DOOR & WALL
SHEET METAL DOOR
DETAIL "B"**

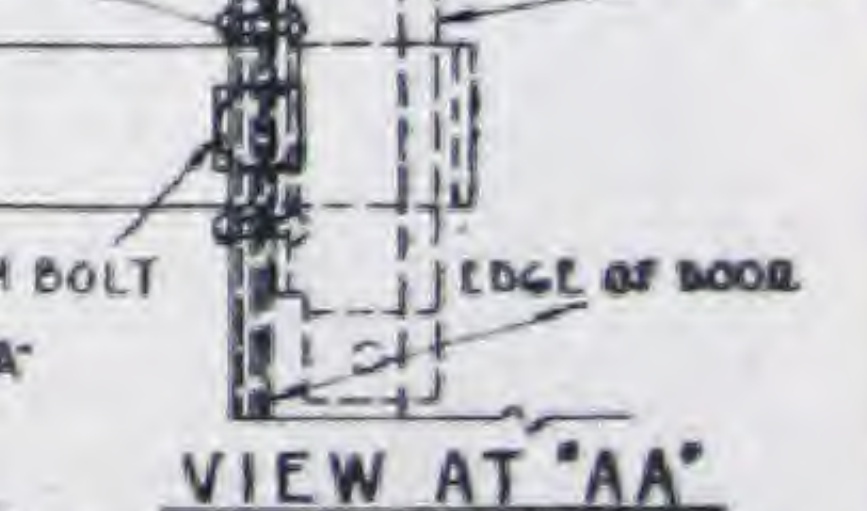
**SECT. THRU DOOR & WALL
TIN-CLAD DOOR
DETAIL "C"**



FRONT BUMPER DETAIL

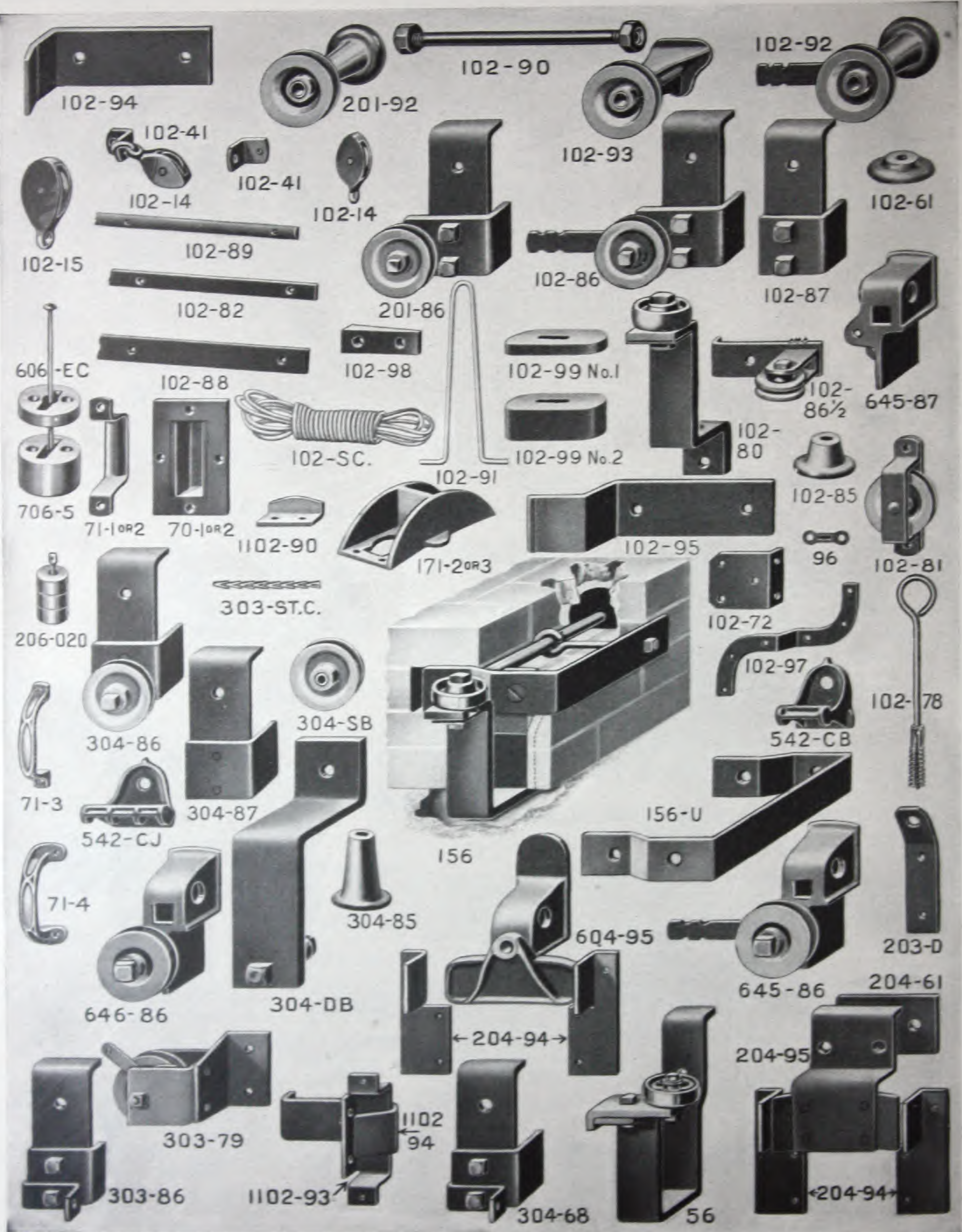


**REAR BINDER DETAIL
SHEET METAL DOOR**



**VIEW AT "AA"
OF REAR BINDER**

Square top openings require 14" of head-room for Non-Adjustable hangers at edge of opening toward which the door slides in closing, plus 3/4" for each foot of track. Arched top openings require 14" of head-room above the top of arch, plus 3/4" for each foot that track extends beyond the center of opening. Add three inches to the above clearances for adjustable hangers.





LIST PRICE

Detail of Parts for Sliding Fire Door Fixtures Illustrated on Opposite Page

No.	DESCRIPTION	List Price
56-2	Boston Guide Roller for 2-ply Tin Clad Doors, each.....	\$2.00
56-3	Boston Guide Roller for 3-ply Tin Clad Doors and "FyeR-Wall" Sheet Metal Doors, each.....	2.00
70-1	Flush Door Pull for 2-ply Tin Clad Doors, each.....	.20
70-2	Flush Door Pull for 3-ply Tin Clad Doors, each.....	.25
71-1	Bow Handle for 2-ply Tin Clad Doors, each.....	.10
71-2	Bow Handle for 3-ply Tin Clad Doors, each.....	.15
71-3	Bow Handle for Sheet Metal Doors, each.....	.20
71-4	Bow Handle for Sheet Metal Doors, each.....	.25
96	Fusible Link, each.....	.30
102-14	Cord Pulley, each.....	.25
102-15	Rope Pulley, (used with Chicago style only), each.....	.40
102-14	Cord Pulley assembled with No. 102-41 Rope Angle, each.....	.40
102-41	Rope Angle, each.....	.15
102-61	Cast Washers for Wall Bolts, each.....	.15
102-72	Bumper Shoes, each.....	.10
102-78	Eye Bolt (for Cincinnati style only), each.....	.40
102-80-2	Guide Roller for Angle Iron Frames only, for 2-ply Tin Clad Doors, each.....	2.00
102-80-3	Guide Roller, for Angle Iron Frames only, for 3-ply Tin Clad Doors, each.....	2.00
102-81	Door Pulley, (used with Cincinnati style only) each.....	1.25
102-82	Binder Strips, each.....	.40
102-85	Track Brackets, each.....	.20
102-86	Rope Pulley and Back Bumper with Trigger, each.....	1.70
102-86½	Pulley, each.....	1.00
102-87	Front Bumper, each.....	1.00
102-88	Guide Roller Strip, each.....	.80
102-89	Chafe Strip, each.....	.40
102-90	Chain Tube, (used with Chicago style only), each.....	.60
102-91	Weight Holders, each.....	.15
102-92	Pulley and Trigger, (used with Chicago style only), each.....	1.60
102-93	Pulley, (used with Cincinnati style only), each.....	1.00
102-94	Right Angle Binder, each.....	.50
102-95-2	Binders for 2-ply Tin Clad Doors, each.....	.80
102-95-3	Binders for 3-ply Tin Clad Doors, and "FyeR-Wall" Sheet Metal Doors, each.....	.80
102-97	Link Bracket, each.....	.25
102-98	Wedge, each.....	.10
102-99-1	Lightweight, 3 lbs., each.....	.25
102-99-2	Heavyweight, 9 lbs., each.....	.75
102-SC	Sash Cord, per foot.....	.05
156-U	U-Plate for Guide Rollers, (used with Doors on both sides of wall for walls under 12" thick), each..	1.50
156-2	Guide Roller for 2-ply Tin Clad Doors, each.....	2.00
156-3	Guide Roller for 3-ply Tin Clad Doors, and "FyeR-Wall" Sheet Metal Doors, each.....	2.00
171-2	Center Floor Stop for 2-ply Tin Clad Doors, each.....	.65
171-3	Center Floor Stop for 3-ply Tin Clad Doors, each.....	.75
201-86	Rope Pulley and Back Bumper, complete.....	1.70
201-92	Pulley, (used with Chicago style only), each.....	1.25
203-D	Chain Bracket, (used with Chicago style only), each.....	.25
204-61	Double Washers, each.....	.20
204-94	Center Bumpers, right or left, each.....	.30
204-95-2	Center Binder for 2-ply Tin Clad Doors, each.....	.80
204-95-3	Center Binder for 3-ply Tin Clad Doors and "FyeR-Wall" Sheet Metal Doors, each.....	.80
206-020	Weight, (3 small) with weight holder, each.....	.20
303-79	Wall Pulley, (used with Chicago style only), each.....	2.70
303-86	Back Bumper, (Chicago style only), each.....	1.50
303-STC	Steel Chain, (for closing weights), per foot.....	.10
304-68	Back Bumper, (Chicago style only), each.....	2.25
304-85-2	End Track Bracket for 2-ply Tin Clad Doors, each.....	.20
304-85-3	End Track Bracket for 3-ply Tin Clad Doors and "FyeR-Wall" Sheet Metal Doors, each.....	.30
304-86	Rope Pulley and Back Bumper, complete.....	1.50
304-87	Front Bumper, each.....	1.00
304-DB-2	Drop Brackets for 2-ply Tin Clad Doors, each.....	1.25
304-DB-3	Drop Brackets for 3-ply Tin Clad Doors and "FyeR-Wall" Sheet Metal Doors, each.....	1.25
304-SB	Pulley, each.....	.70
542-CB-2	Center Brackets for 2-ply Tin Clad Doors, each.....	.16
542-CB-3	Center Brackets for 3-ply Tin Clad Doors and "FyeR-Wall" Sheet Metal Doors, each.....	.16
542-CJ-2	Joint Brackets for 2-ply Tin Clad Doors, each.....	.30
542-CJ-3	Joint Brackets for 3-ply Tin Clad Doors and "FyeR-Wall" Sheet Metal Doors, each.....	.30
604-95-2	Combination Center Bracket and Binder for 2-ply Tin Clad Doors, each.....	1.10
604-95-3	Combination Center Bracket & Binder for 3-ply Tin Clad Doors, & "FyeR-Wall" Sheet Metal Doors ea.	1.20
606-EC	Extra Weight, (used with Chicago style only), each.....	.20
645-86-2	Combination End Bracket and Bumper with Trigger, right or left, for 2-ply Tin Clad Doors, each....	1.70
645-86-3	Combination End Bracket and Bumper with Trigger, right or left, for 3-ply Tin Clad Doors and "FyeR-Wall" Sheet Metal Doors, each.....	1.70
645-87-2	Combination End Bracket and Bumper, right or left, for 2-ply Tin Clad Doors, each.....	1.10
645-87-3	Combination End Bracket and Bumper, right or left, for 3-ply Tin Clad Doors, and "FyeR-Wall Sheet Metal Doors, each.....	1.10
646-86-2	Combination End Bracket and Bumper, right or left, for 2-ply Tin Clad Doors, each.....	1.70
646-86-3	Combination End Bracket and Bumper, right or left, for 3-ply Tin Clad Doors, and "FyeR-Wall Sheet Metal Doors, each.....	1.70
706-5	Heavyweight, (used with Chicago style only), each.....	.60
1102-90	Track Binder, (used with "FyeR-Wall" Sheet Metal Doors only), each.....	.30
1102-93	Rear Binder Pocket, (used with "FyeR-Wall" Sheet Metal Doors only), each.....	1.00
1102-94	Rear Binder Hook, (used with "FyeR-Wall" Sheet Metal Doors only), each.....	.80

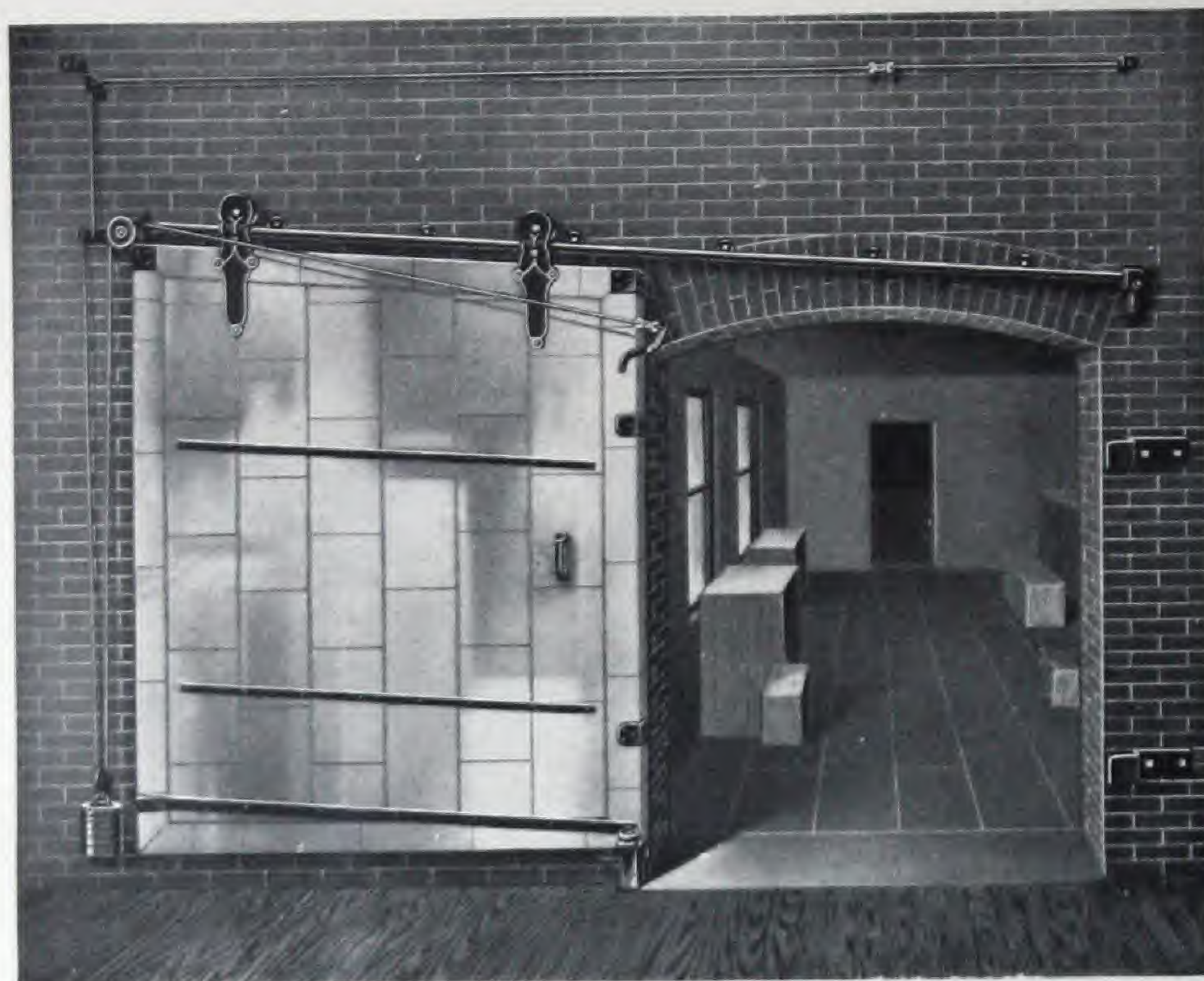
R-W Two Link Round Track Fire Door Fixtures

For Single Sliding Doors, Incline Track.

R-W No. 645-2 For Two-ply (1- $\frac{3}{4}$ inch) Tin Clad Doors.

R-W No. 645-3 For Three-ply (2- $\frac{5}{8}$ inch) Tin Clad Doors.

R-W No. 1645 For "FyeR-Wall" Sheet Metal Doors.



No. 645 Fire Door Fixtures Applied to Tin Clad Fire Door.

Above hardware is included in list of Fire Door Hardware approved and labeled by National Board of Fire Underwriters. We recommend these fixtures where Headroom exceeds three feet. This arrangement of automatic device provides two fusible links—one constantly in opening and exposed from both sides, and one link near ceiling. If either link fuses, door is released and closes by gravity. If doors are used on both sides of wall, the cord can be made to pass through wall, near ceiling, at points where it is shown attached to the wall in illustration, and same arrangement continued on other side, thus providing four links. The fusing of any one releases both doors.

DIRECTIONS FOR ORDERING

STATE: First—Number of openings and number of doors; whether doors are on one side or both sides of wall. If latter, mention if fixtures can be bolted together and state thickness of wall. Do not say doors when you mean openings, as doors must lap four inches on each side and at top.

Second—Width and height of opening, (mention width first).

Third—Thickness of doors, if two-ply tin clad (1 $\frac{1}{2}$ inches), three-ply tin clad (2 $\frac{1}{8}$ inches) or "FyeR-Wall" sheet metal doors.

Fourth—Thickness of wall, when wall bolts are required, or when doors are used on both sides of wall, in which case special U Wall plates are required for guide rollers, when walls are less than 12" thick.

Fifth—Distance from edge of opening to walls at right angles, if any. State distances from highest points of openings to nearest obstructions overhead.

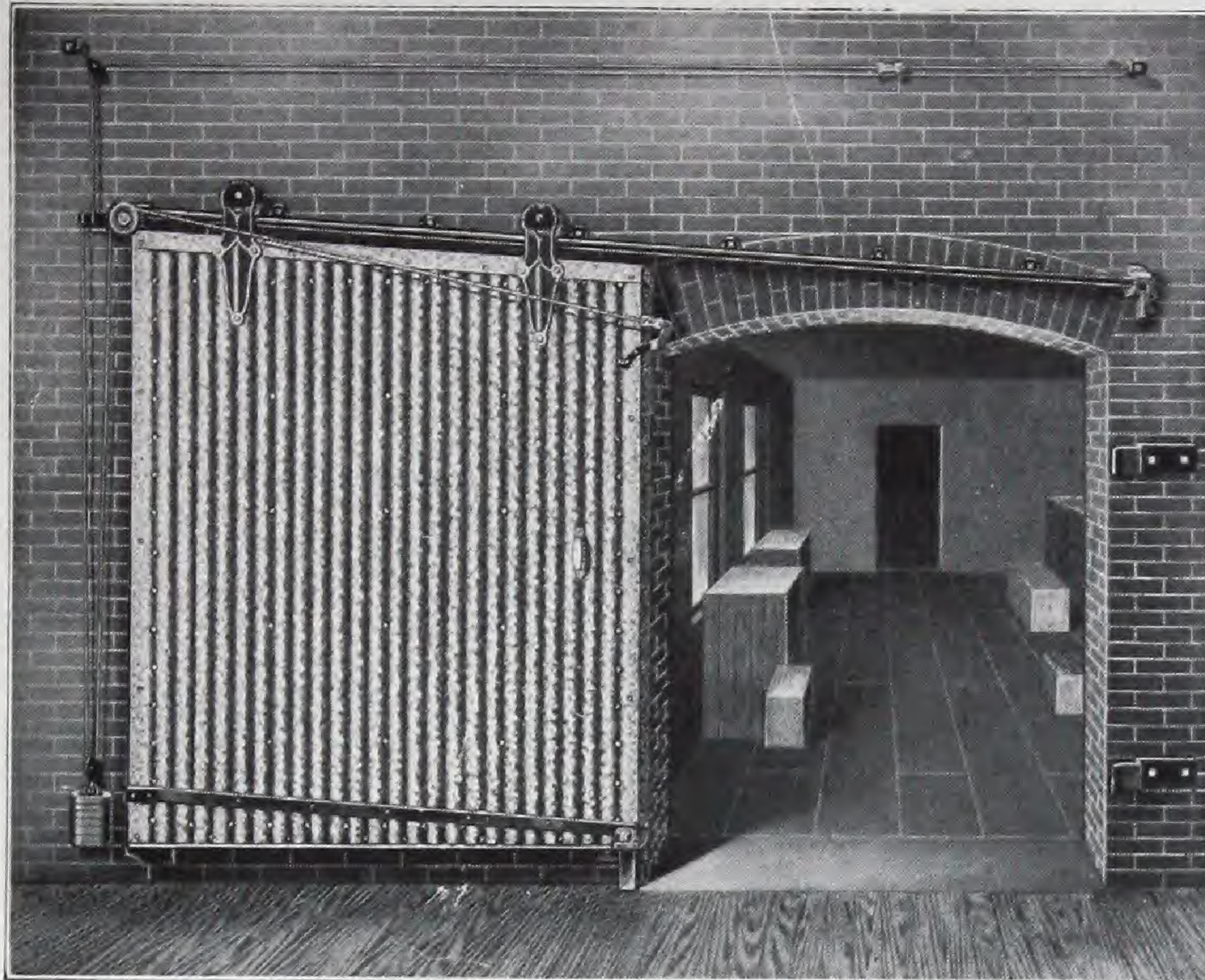
Sixth—If opening is square or arched top.

NOTE: Minimum clearances and special automatic closing arrangements are shown on page 25. Unless otherwise specified Standard Style will be furnished.

Detail of parts shown on pages 20-21. See pages 82-85 for R-W Standard Approved and Labeled Tin Clad, and R-W "FyeR-Wall" Sheet Metal Doors. Approved hardware suitable for Saino and Merchant & Evans doors furnished when required.



R-W Two Link Round Track Fire Door Fixtures



No. 1645 Fire Door Fixtures Applied to "FyeR-Wall" Sheet Metal Door.

List Price for Nos. 645-2, 645-3 and 1645 Fire Door Fixtures.

List price includes non-adjustable hangers, track and fixtures complete for doors when used on one side of wall only. If doors are to be used on both sides of wall, double sets will be required and the price will be doubled. Fixtures packed complete with all bolts and screws for attaching parts to door, heavy cast washers for wall bolts, and necessary counter balance weights. Weights are furnished regularly for openings 8' high. If opening is higher, additional weights are required.

Wall bolts are not included but will be furnished at moderate price if thickness of wall is given.

Width of Opening with 1 pr. Hangers	List Price	Weight per Set, Lbs.	*Width of Opening with 1½ pr. Hangers	List Price	Weight per Set, Lbs.
3 feet	\$19.00	147	6½ feet	\$23.70	203
3½ feet	19.40	154	7 feet	24.00	210
4 feet	19.70	160	7½ feet	24.30	217
4½ feet	20.00	167	8 feet	24.70	223
5 feet	20.30	175	8½ feet	25.00	229
5½ feet	20.70	181	9 feet	25.30	236
6 feet	21.00	185	9½ feet	25.70	242
			10 feet	26.00	250

No. 645-2, 645-3 or No. 1645 Automatics only, weight 45 lbs. Per set.....\$ 5.00

No. 645-2, 645-3 or No. 1645 Fixtures only, less Hangers, Track and Brackets; Binder, Chafe and Guide
Roll Strips, weight 100 lbs. Per set..... 12.00

No. 542-C Track only, with brackets, for two-ply tin clad doors, weight 2½ lbs. Per foot..... .34

No. 542-C Track only, with brackets, for three-ply tin clad or "FyeR-Wall" sheet metal doors, weight 2½ lbs.
Per foot

(Length of track equals twice width of opening plus 15½".)

No. 542-C Hangers with Back Plates used with No. 645-2 Hardware, (page 52), weight 25½ lbs. Per pair.. 4.20

No. 542-C Hangers only, used with No. 645-3 Hardware, (page 52), weight 22 lbs. Per pair..... 4.20

No. 742 Hangers with Back Plates, used with No. 1645 Hardware, (page 52), weight 25½ lbs. Per pair.... 4.20

No. 642-5 Adjustable Hangers only, (page 52), weight 32 lbs. Per pair..... 8.50

*For openings, (not doors), over 6' wide, Underwriters require three hangers.

Discount.....



Packing List for Nos. 645-2, 645-3 and No. 1645 Fire Door Fixtures—Standard Style.

645-2	645-3	1645	DESCRIPTION	List Price
1	..	..	No. 70-1 Flush Pull, each.....	\$.20
..	1	..	No. 70-2 Flush Pull, each.....	.25
1	..	..	No. 71-1 Bow Handle, each.....	.10
..	1	..	No. 71-2 Bow Handle, each.....	.15
..	..	1	No. 71-3 Bow Handle, each.....	.20
..	..	1	No. 71-4 Bow Handle, each.....	.25
1	1	1	No. 96 Fusible Link (One additional is attached to No. 102-97 Link Bracket), each .....	.30
*	*	*	No. 102-SC Sash Cord with wire link attached to each end. (As required), per foot.....	.05
1	1	1	No. 102-14 Pulley, each .....	.25
1	1	1	No. 102-41 Rope Angle with No. 102-14 Pulley attached, each.....	.40
1	1	1	No. 102-41 Rope Angle, each.....	.15
*	*	*	No. 102-61 Cast Washers. (See table below). Not required when doors are used on both sides of wall, each.....	.15
8	8	..	No. 102-72 Bumper Shoes, each.....	.10
1	..	..	No. 102-80-2 Guide Roller. (For Angle Iron Sills only), each.....	2.00
..	1	1	No. 102-80-3 Guide Roller. (For Angle Iron Sills only), each.....	2.00
2	2	..	No. 102-82 Binder Strips. Length equals width of opening less 4", each .....	.40
1	1	1	No. 102-86½ Pulley. (Required only when doors are used on both sides of wall), each.....	1.00
1	1	1	No. 102-88 Guide Roll Strip. Length equals width of opening plus 3". (Plus 6" for No. 1645), each.....	.80
2	2	..	No. 102-89 Chafe Strips. Length equals width of opening less 4", each .....	.40
1	1	1	No. 102-91 Weight Holder, each.....	.15
2	..	..	No. 102-95-2 Binders, each .....	.80
..	2	2	No. 102-95-3 Binders, each .....	.80
1	1	1	No. 102-97 Link Bracket with No. 96 Fusible Link Attached, complete .....	.55
1	1	1	No. 102-98 Wedge, each .....	.10
*	*	*	No. 102-99 No. 1 Lightweight. (According to size of opening), each..	.25
*	*	*	No. 102-99 No. 2 Heavyweights. (According to size of opening), each ..	.75
1	..	..	†No. 156-2 Guide Roller. (Omit for Angle Iron Sills), each.....	2.00
..	1	1	*No. 156-3 Guide Roller. (Omit for Angle Iron Sills), each.....	2.00
2	..	..	No. 542-C Back Plates (Openings over 6' wide require 3), each.....	.70
1 Pr.	1 Pr.	1 Run	No. 542-C Hangers. (Openings over 6' wide require 1½ pair), per pair.....	4.20
1 Run	1 Run	..	No. 542-C Track length equals twice width of opening plus 15½", per foot.....	.34
*	*	*	No. 542-CB-2 Center Brackets (16c each) and 542-CJ-2 Joint Brackets. (See table below), each .....	.30
..	..	..	No. 542-CB-3 Center Brackets (16c each) and 542-CJ-3 Joint Brackets. (See table below), each .....	.30
1	1	1	No. 645-86-2 Combination End Bracket and Bumper, Right or Left, each.....	1.70
..	..	..	No. 645-86-3 Combination End Bracket and Bumper, Right or Left, each.....	1.70
1	1	1	No. 645-87-2 Combination End Bracket and Bumper, Right or Left, each.....	1.10
..	..	..	No. 645-87-3 Combination End Bracket and Bumper, Right or Left, each.....	1.10
..	..	1 Pr.	No. 742 Hangers with Back Plates. (Openings over 6' wide require 1½ pr.) Per pair ..	4.20
..	..	1	No. 1102-93 Rear Binder Pocket, each.....	1.00
..	..	1	No. 1102-94 Rear Binder Hook, each.....	.80
1	1	1	Package Screws and Bolts.....	

†No 56-2 Boston Guide Roller may be substituted for this item if desired.

*No. 56-3 Boston Guide Roller may be substituted for this item if desired.

Table of No. 542C-2 and No. 542C-3 Brackets and No. 102-61 Washers For Above Fixtures.

Width of Opening	Number of Brackets (Center and Joint)	*Number of Washers
Up To 3' 2"	4	11
3' 3" to 4' 8"	5	12
4' 9" to 6' 0"	6	13
6' 1" to 6' 11"	8	15
7' 0" to 8' 8"	9	16
8' 9" to 10'	10	17
10' 1" to 10' 5"	12	19
10' 6" to 10' 11"	13	20
		Fixtures Only Require
		7

*No 1645 Fixtures require one more washer than shown above.

Wall Bolt List for No. 645-2, No. 645-3 and No. 1645 Fire Door Fixtures

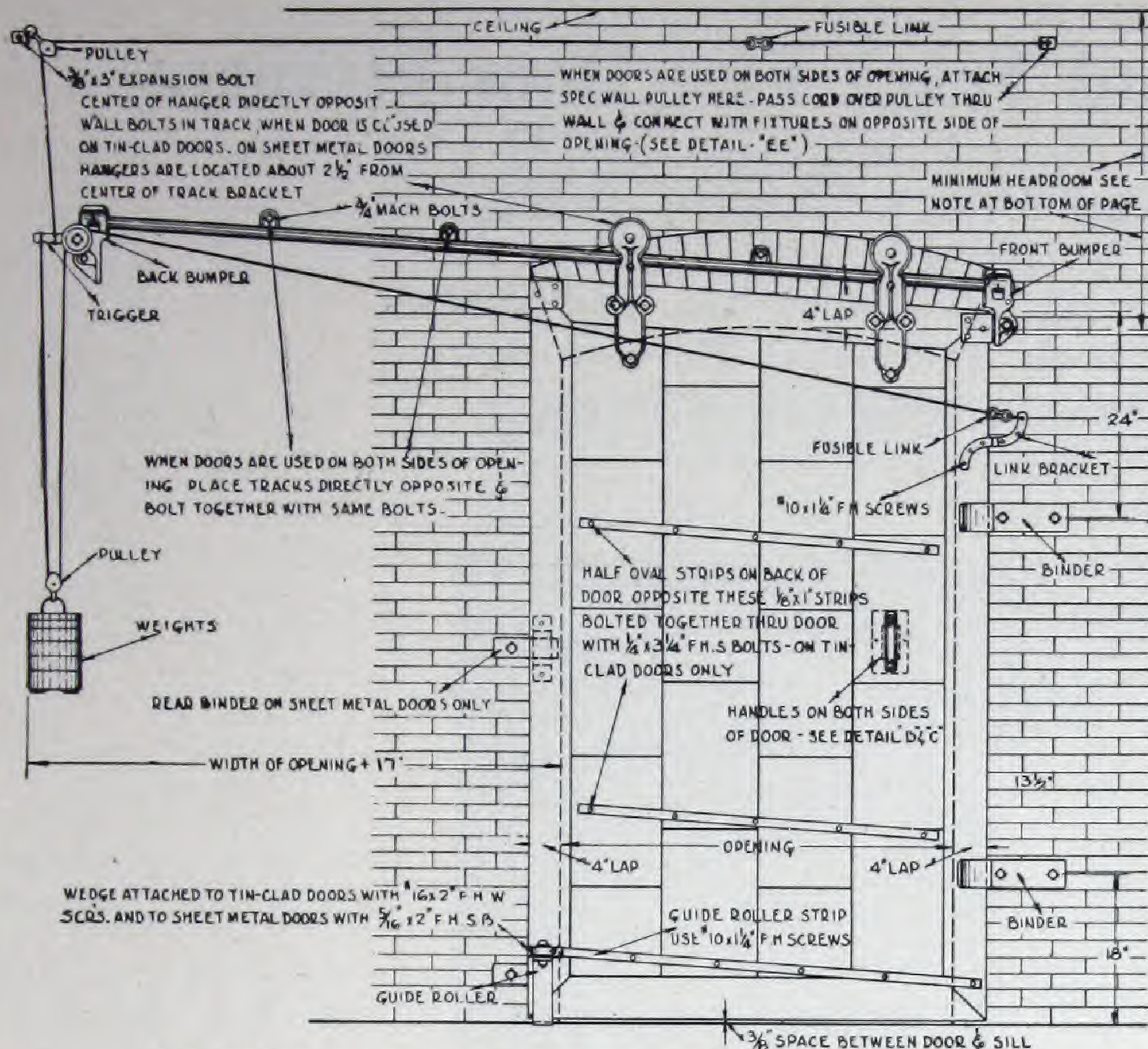
Wall Bolts are not furnished with sets of fixtures regularly but will be furnished at prevailing market prices when thickness of wall is given and customer requests them. The table below gives the number and size of bolts required for various sized openings. Note that the number of bolts is the same for hardware installed on one or both sides of wall.

NUMBER OF ¾" BOLTS REQUIRED FOR VARYING WIDTHS OF DOORWAY OPENINGS

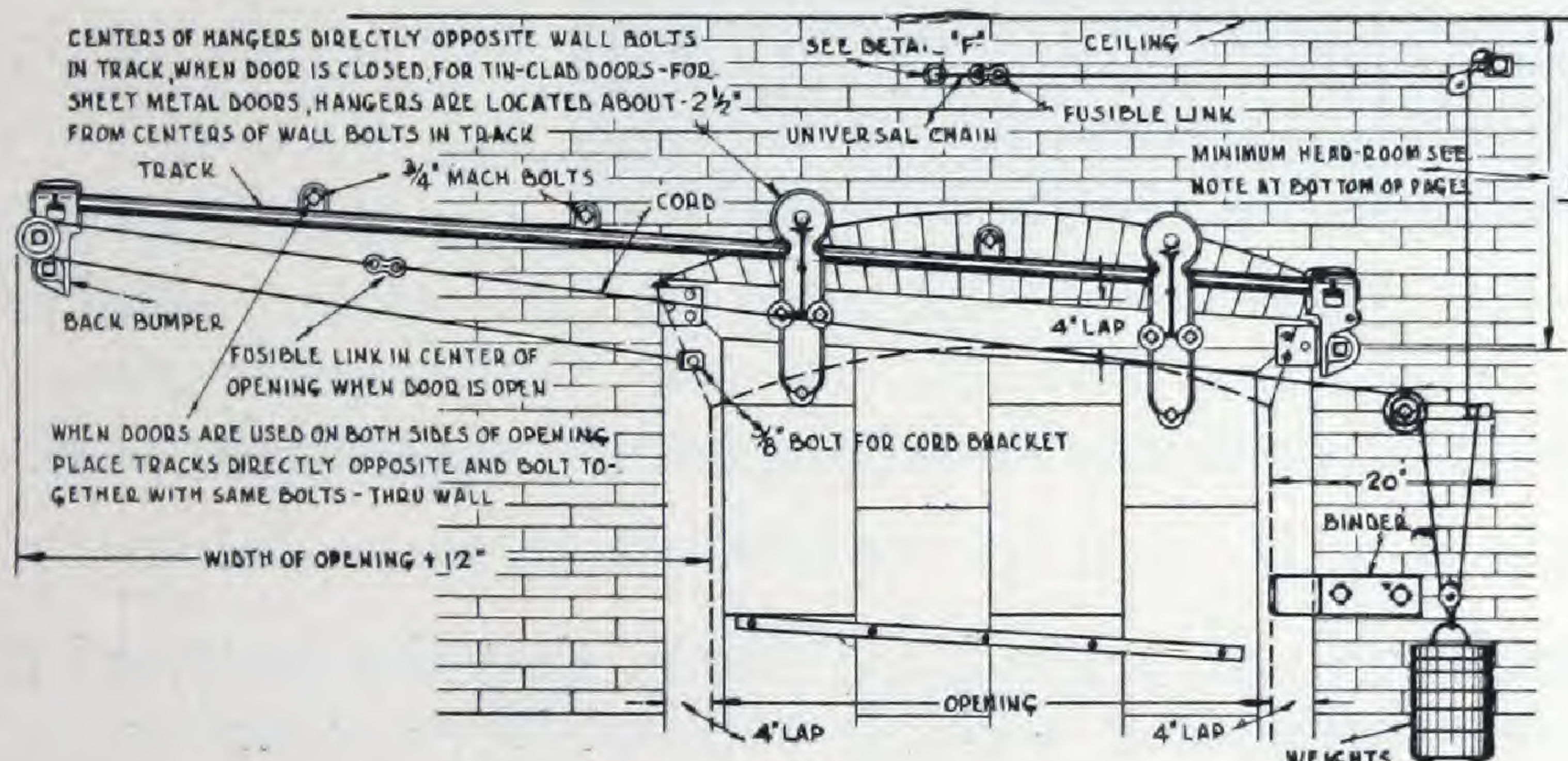
Fixtures bolts are used to fasten.....	LENGTH OF BOLTS REQUIRED FOR SETS INSTALLED							
	Up to 3' 2" wide	Opening 3' 3" to 4' 8"	Opening 4' 9" to 6' 0"	Opening 6' 1" to 6' 11"	Opening 7' 0" to 8' 8"	Opening 8' 9" to 10'	Opening 10' 1" to 10' 5"	Opening 10' 6" to 10' 11"
Binders	4	4	4	4	4	4	4	4
*Guide Rollers.....	1	1	1	1	1	1	1	1
Front Track Brackets.....	1	1	1	1	1	1	1	1
Center Track Brackets.....	4	5	6	8	9	10	12	13
Rear Track Brackets.....	1	1	1	1	1	1	1	1
Rear Binder Hook ((in No 1645 set only)	1	1	1	1	1	1	1	1
Total Bolts in 645-2 and 645-3 sets.....	11	12	13	15	16	17	19	20
Total Bolts in No. 1645 sets.....	12	13	14	16	17	18	20	21

*Wall Bolt not required when No. 102-80 Guide Rollers are used.

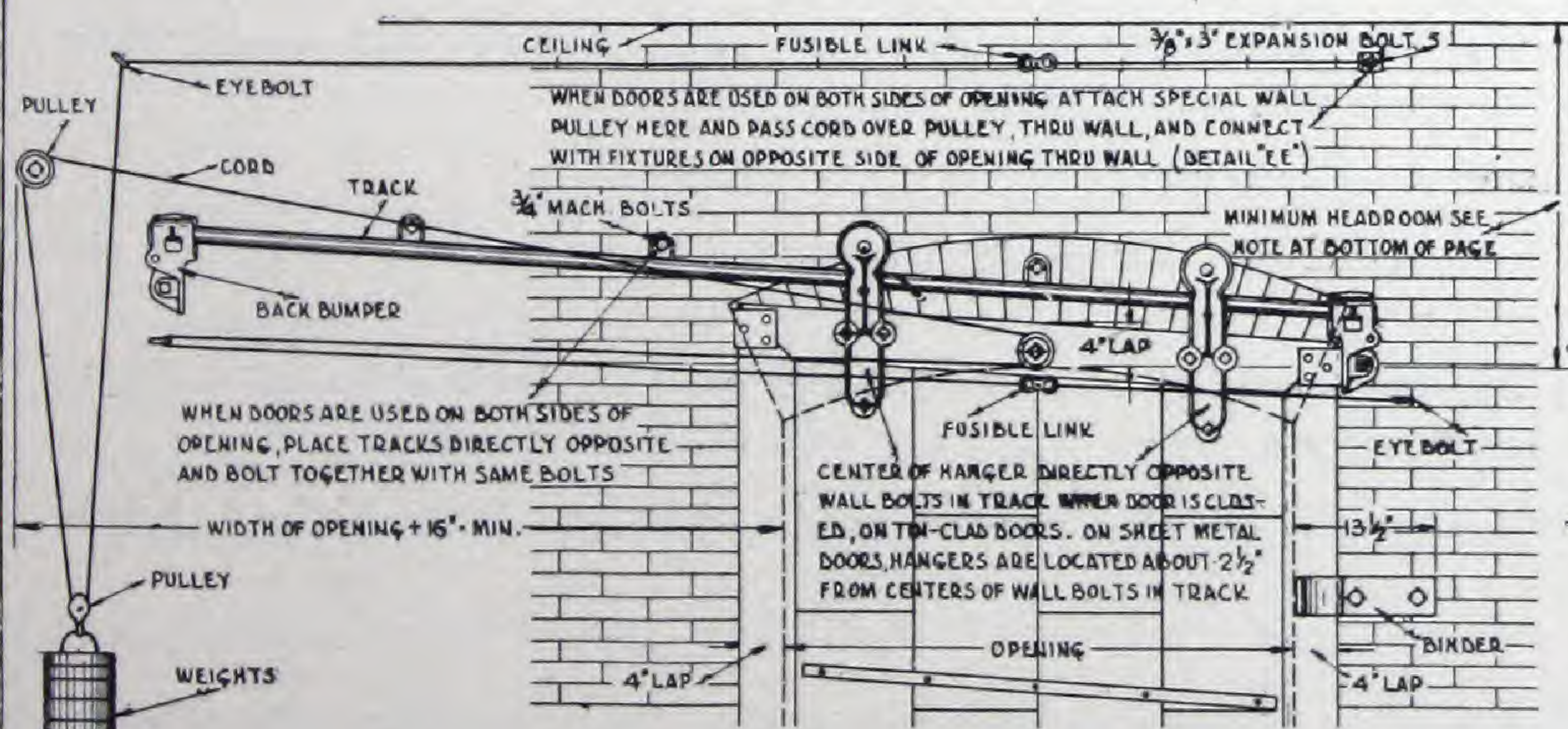
- (A) 5" for 2-ply tin clad doors. 2½" for 3-ply tin clad or "FyeR-Wall" sheet metal doors.
 (B) 7½" for 2-ply tin clad doors. 2½" for 3-ply tin clad or "FyeR-Wall" sheet metal doors.
 (C) 6½" for 2-ply tin clad doors. 2½" for 3-ply tin clad or "FyeR-Wall" sheet metal doors.
 (D) 11" for 2-ply tin clad doors 2½" for 3-ply tin clad or "FyeR-Wall" sheet metal doors.



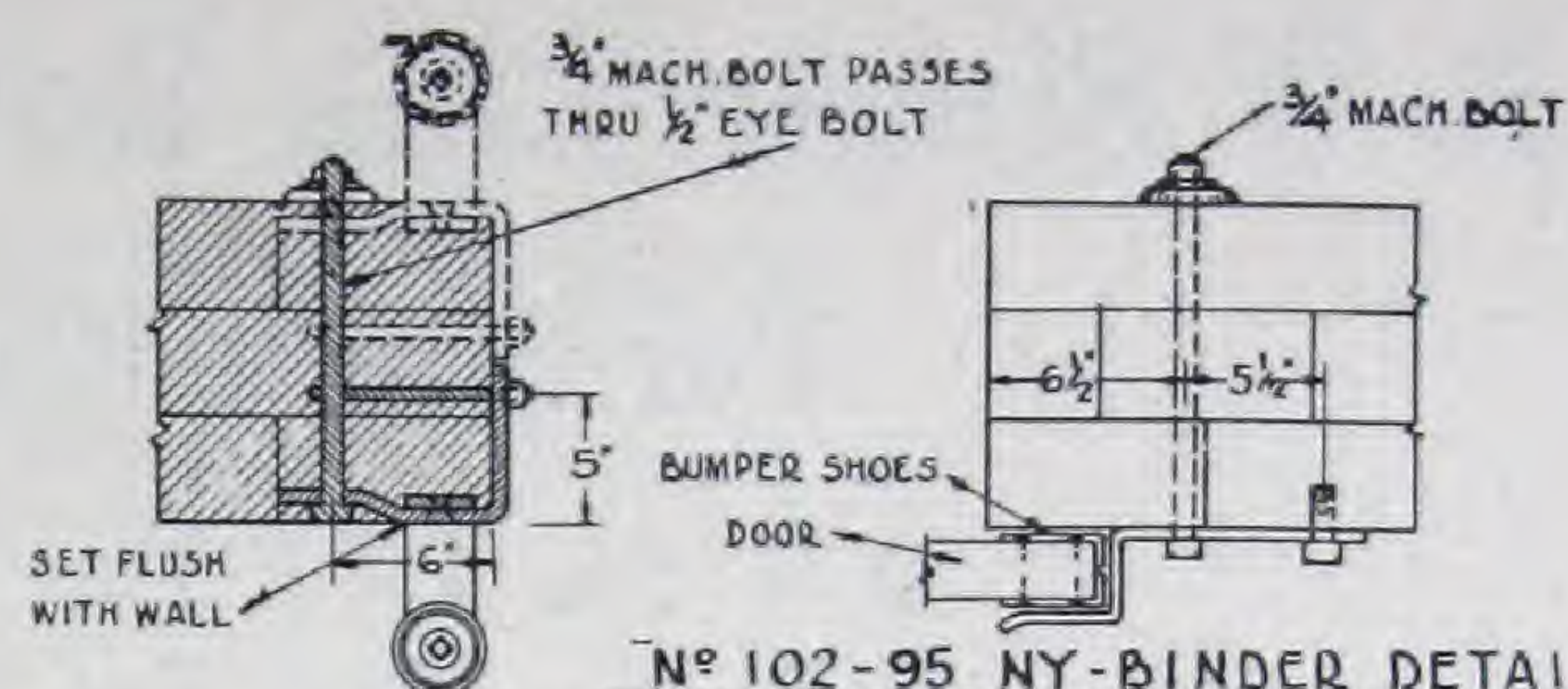
**RICHARDS-WILCOX No. 645 FIRE DOOR FIXTURES
STANDARD STYLE**



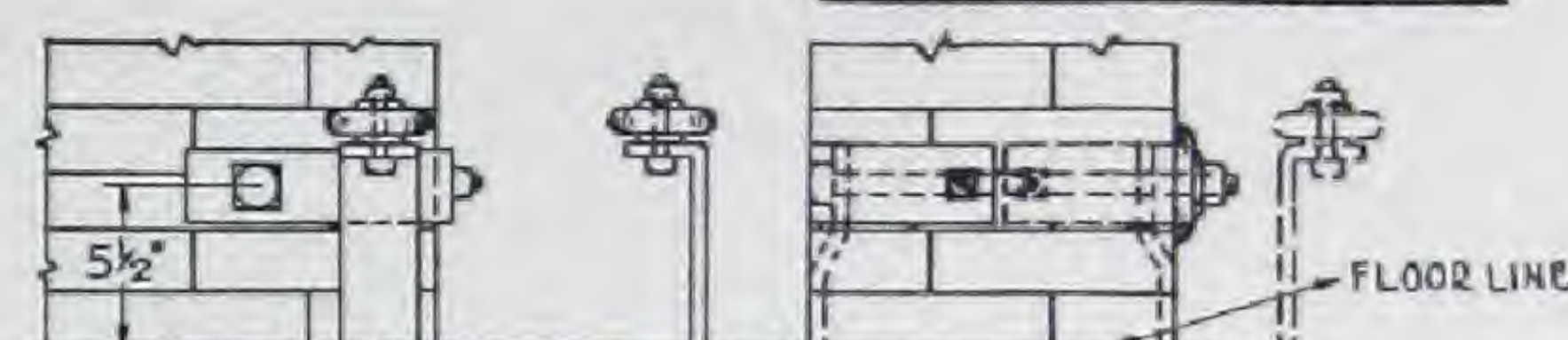
**RICHARDS-WILCOX No. 645 FIRE DOOR FIXTURES
CHICAGO STYLE**



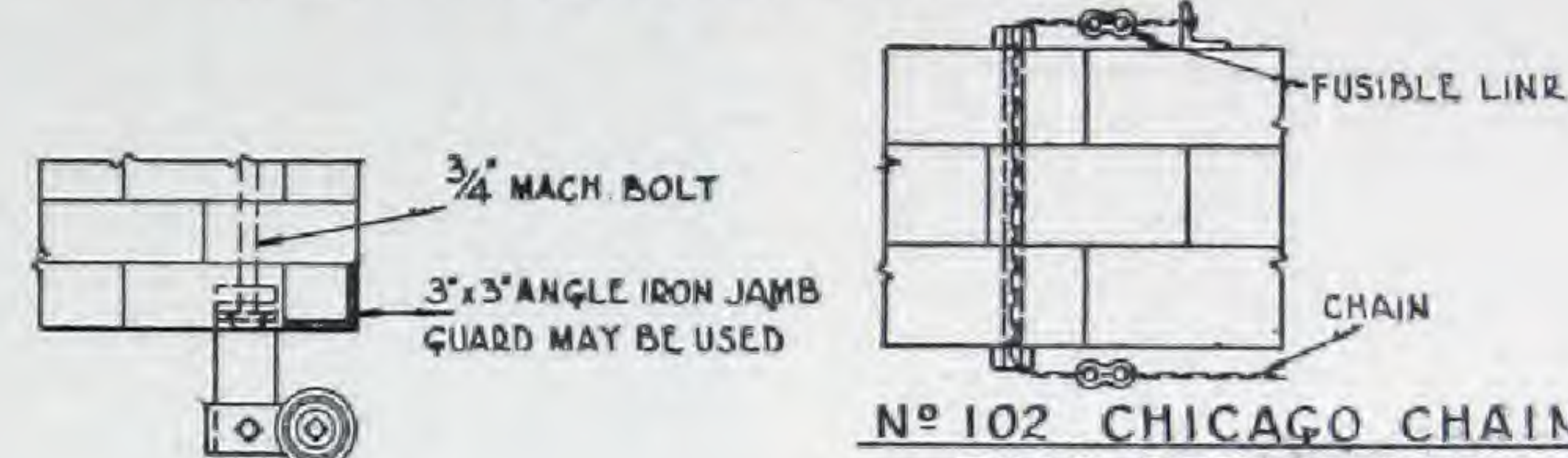
**RICHARDS-WILCOX No. 645 FIRE DOOR FIXTURES
CINCINNATI STYLE**



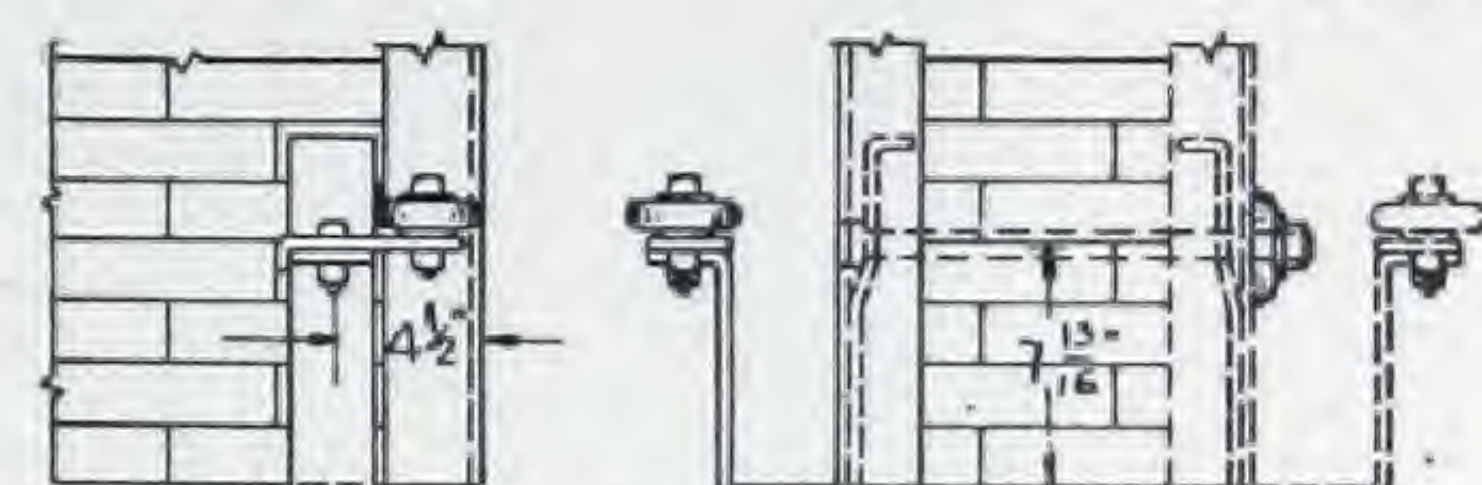
**No. 102-95 NY-BINDER DETAIL
NEW YORK STYLE**



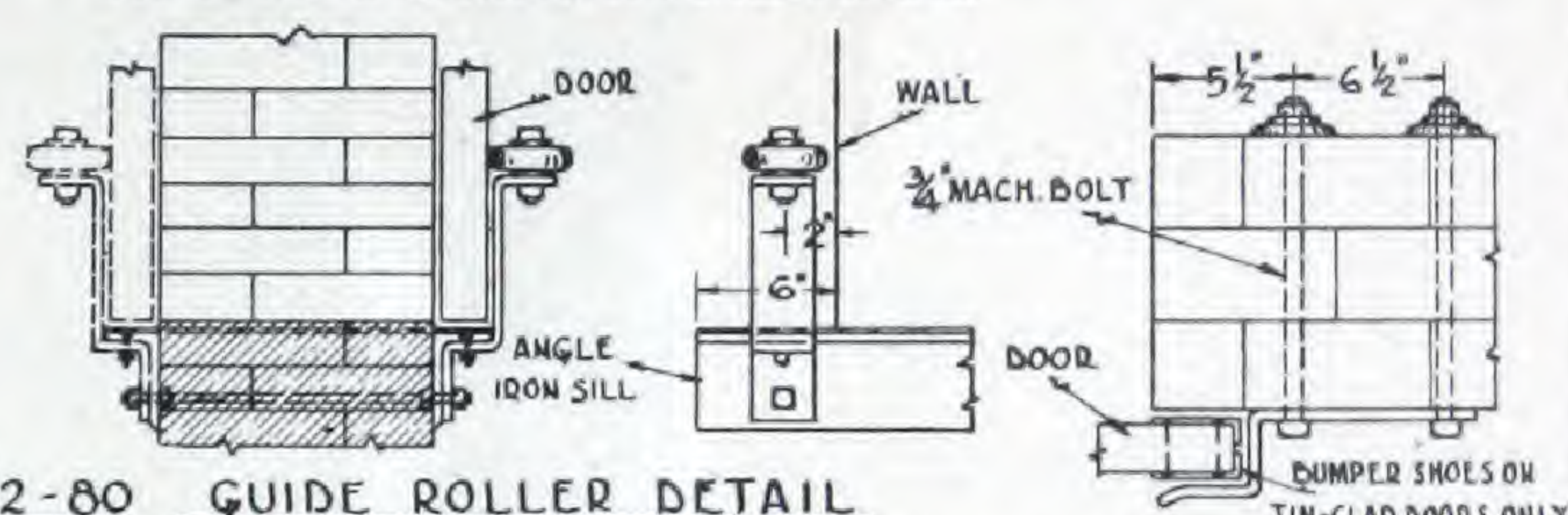
**No. 156 GUIDE ROLLER DETAIL
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING**



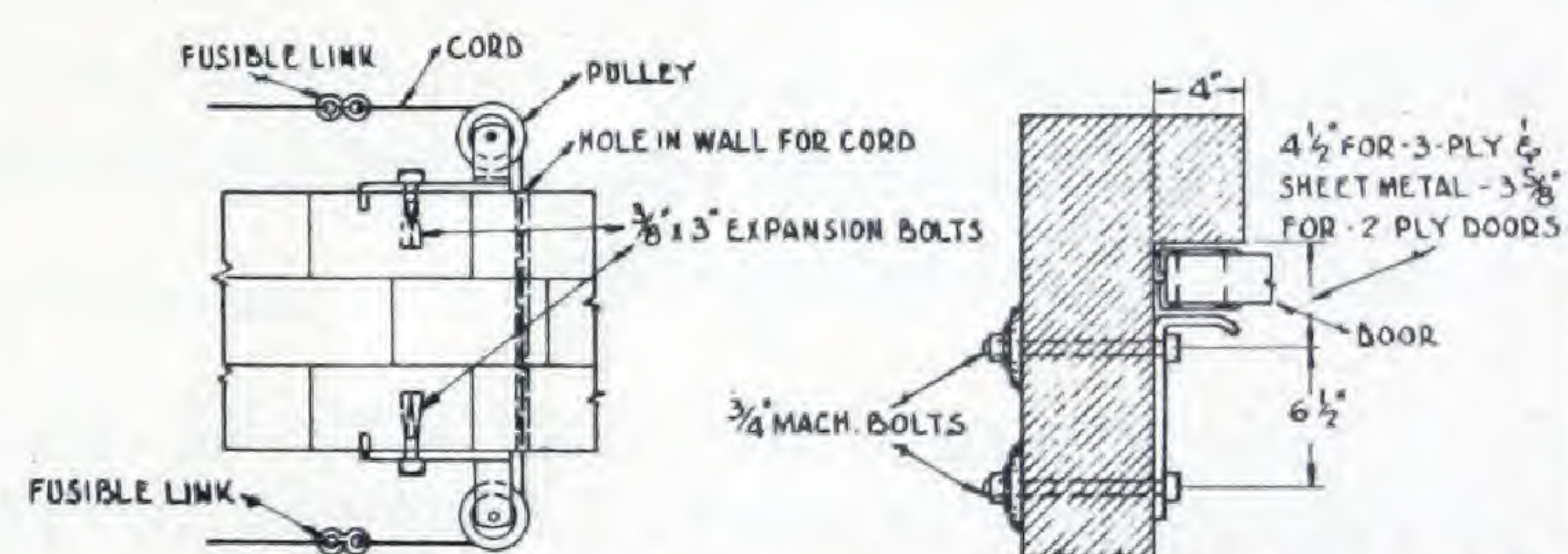
**No. 102 CHICAGO CHAIN
TUBE DETAIL 'F'**



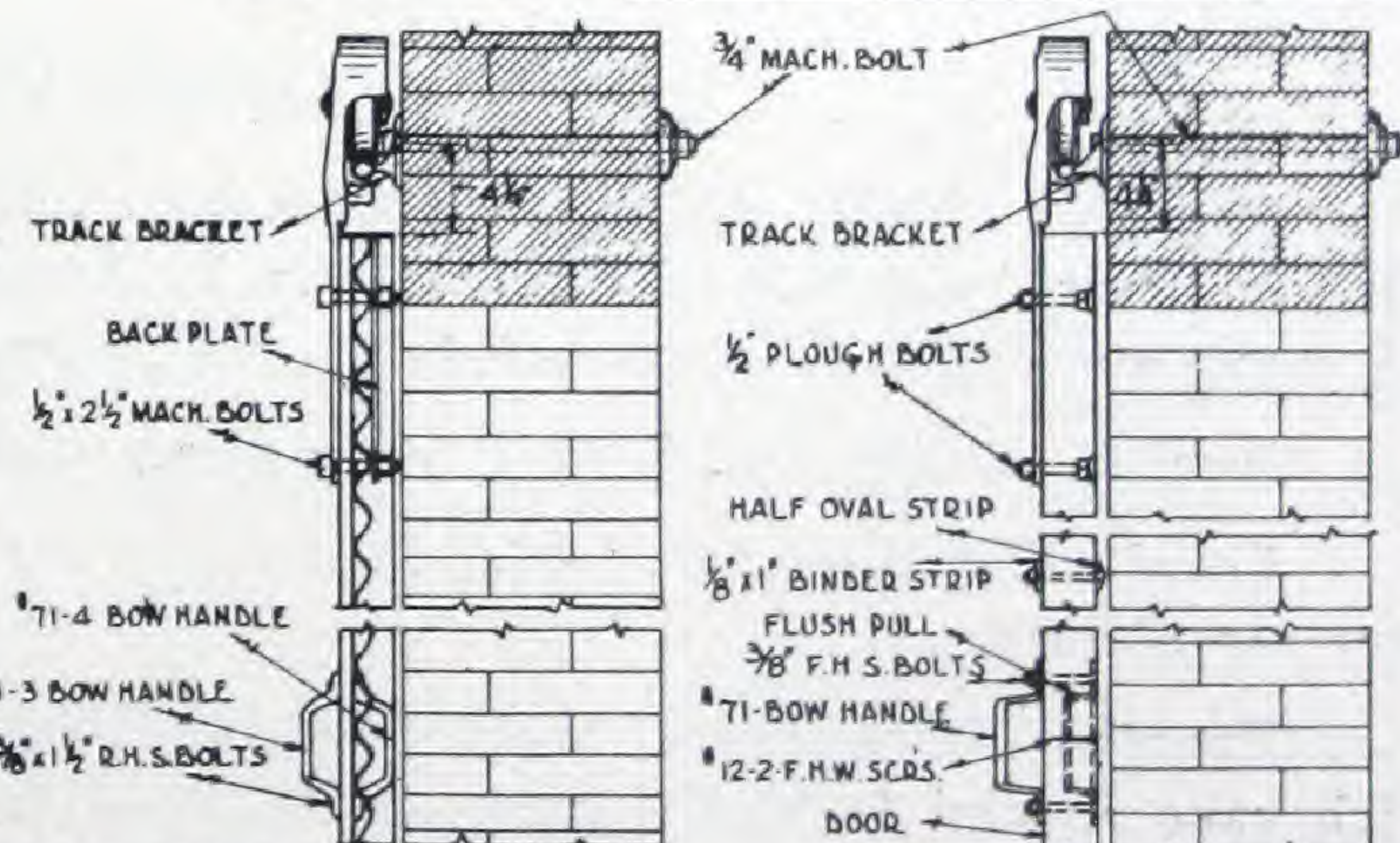
**No. 56 BOSTON GUIDE ROLLER DETAIL
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING**



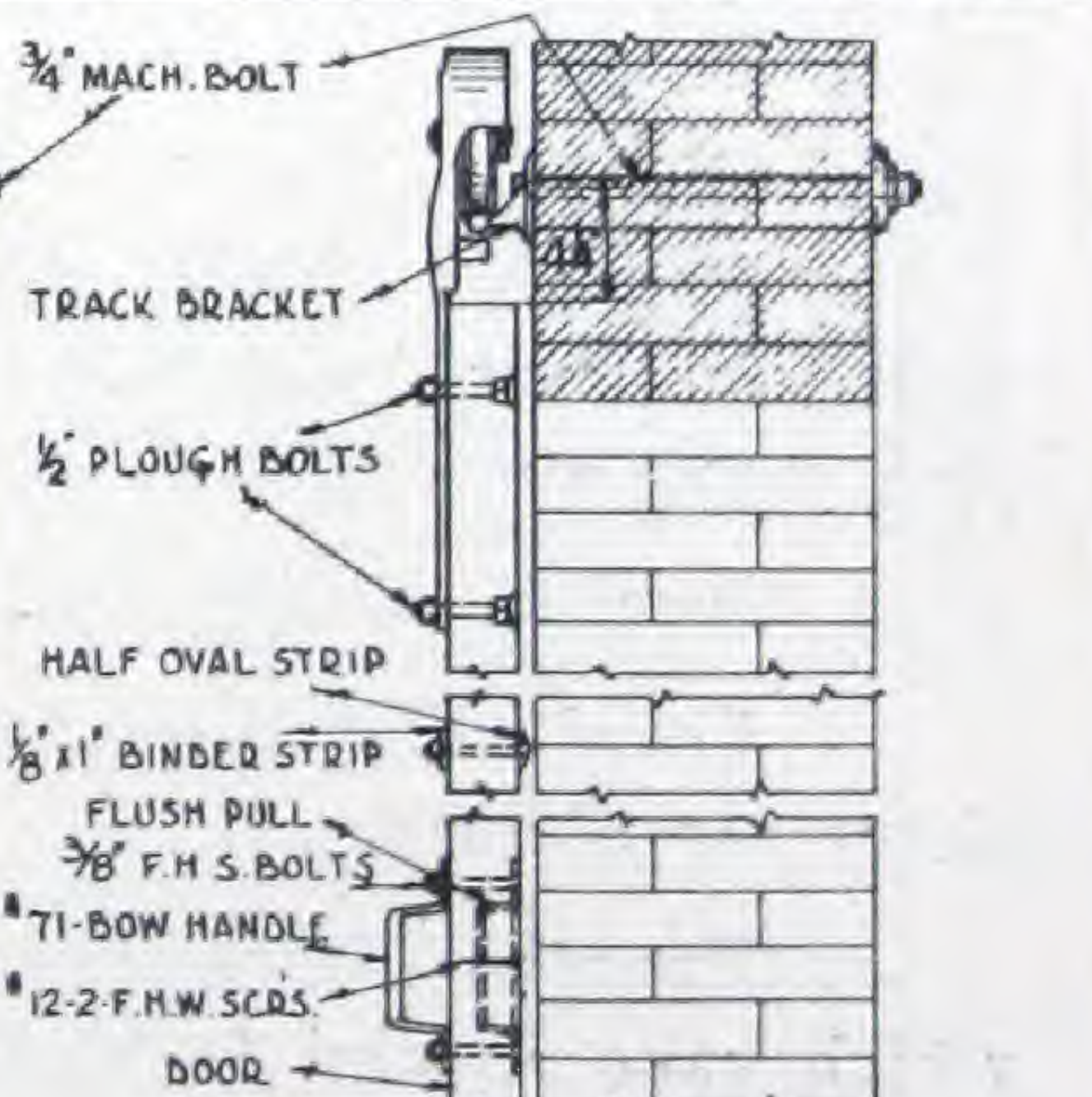
**No. 102-80 GUIDE ROLLER DETAIL
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING**



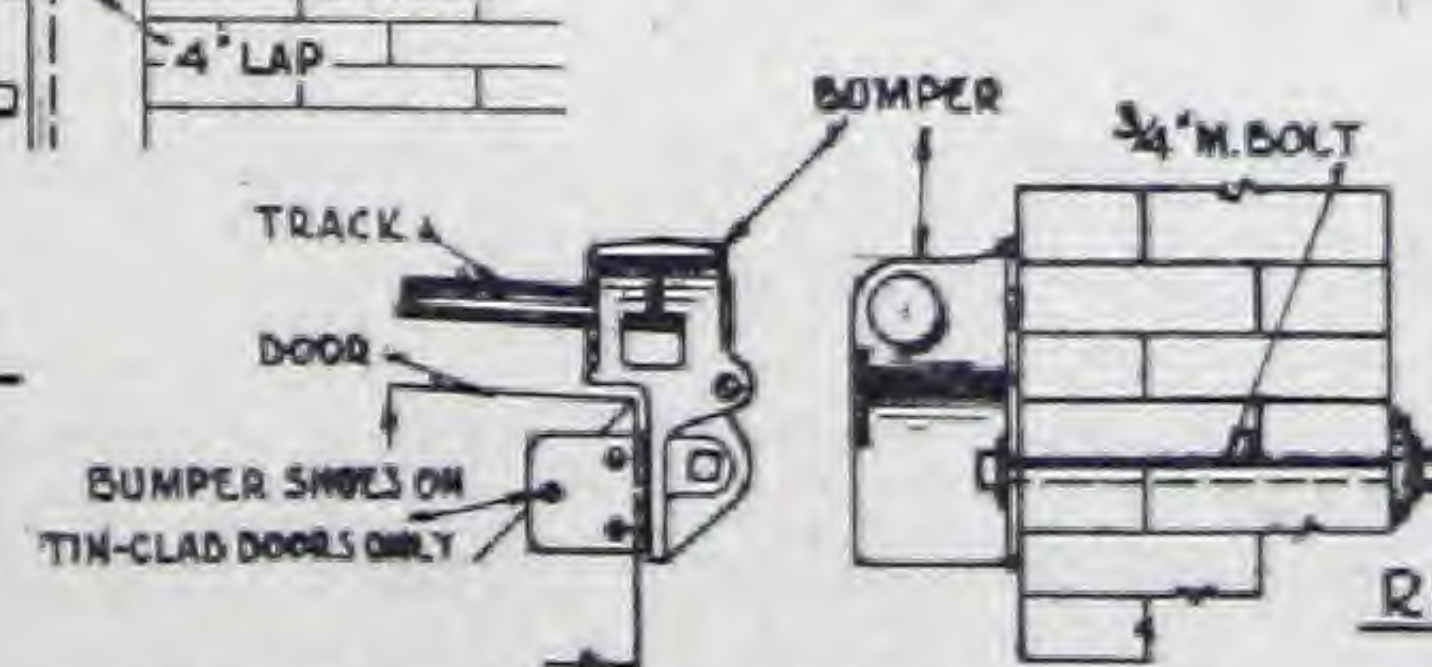
DETAIL 'EE' No. 102-94 RIGHT ANGLE BINDER



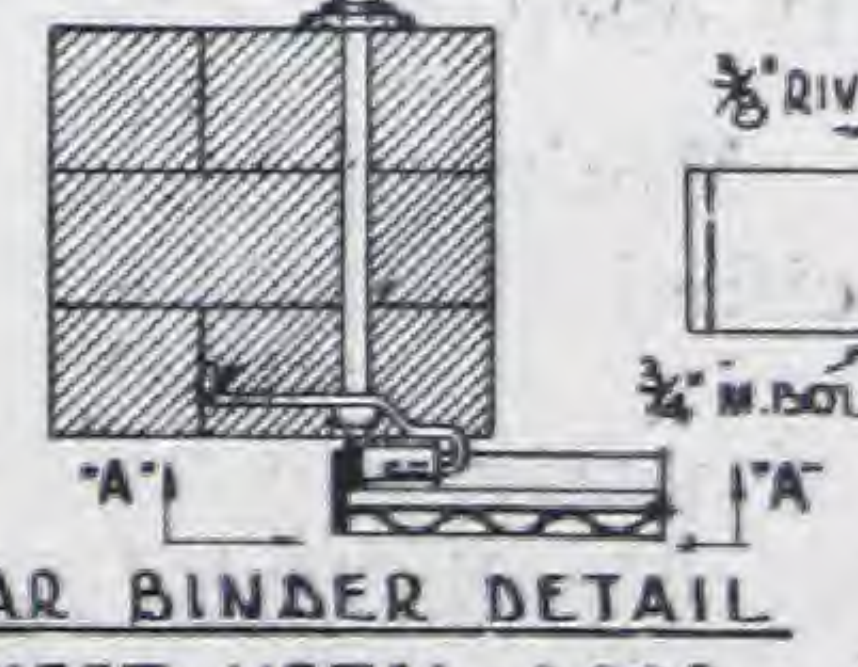
**SECT. THRU DOOR & WALL
SHEET METAL DOOR
DETAIL 'B'**



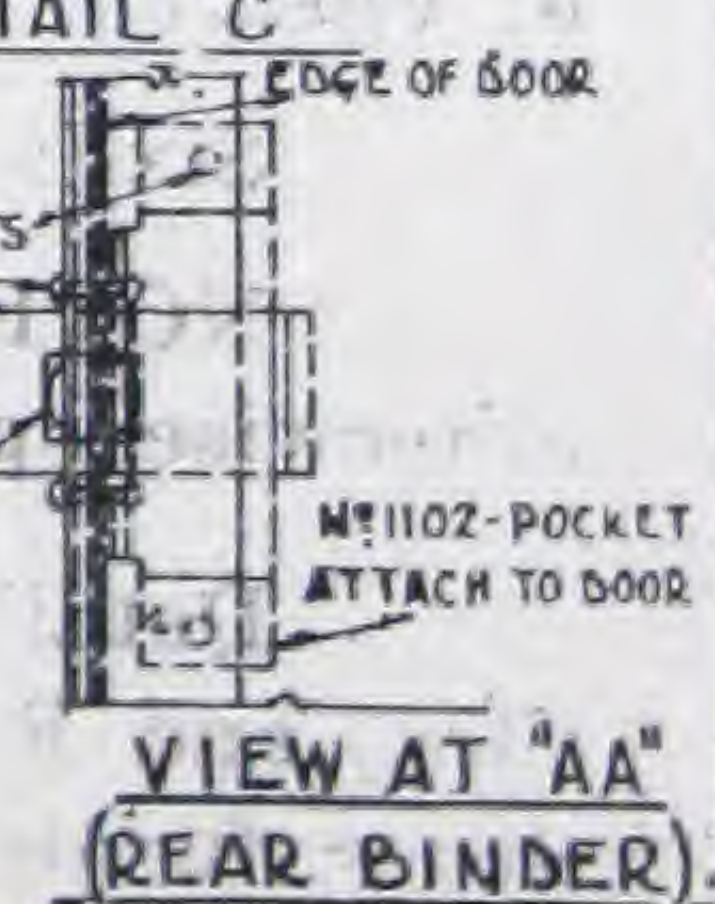
**SECT. THRU TIN-CLAD
DOOR & WALL
DETAIL 'C'**



FRONT BUMPER DETAIL



**REAR BINDER DETAIL
SHEET METAL DOOR**



**VIEW AT 'AA'
(REAR BINDER)**

Square top openings require 12" of head-room for non-adjustable hangers at edge of openings toward which the door slides in closing, plus 3/4" for each foot of track.
Arched top openings require 12" head-room above the top of arch, plus 3/4" for each foot the track extends beyond the center of opening. Add 2" for adjustable hangers.



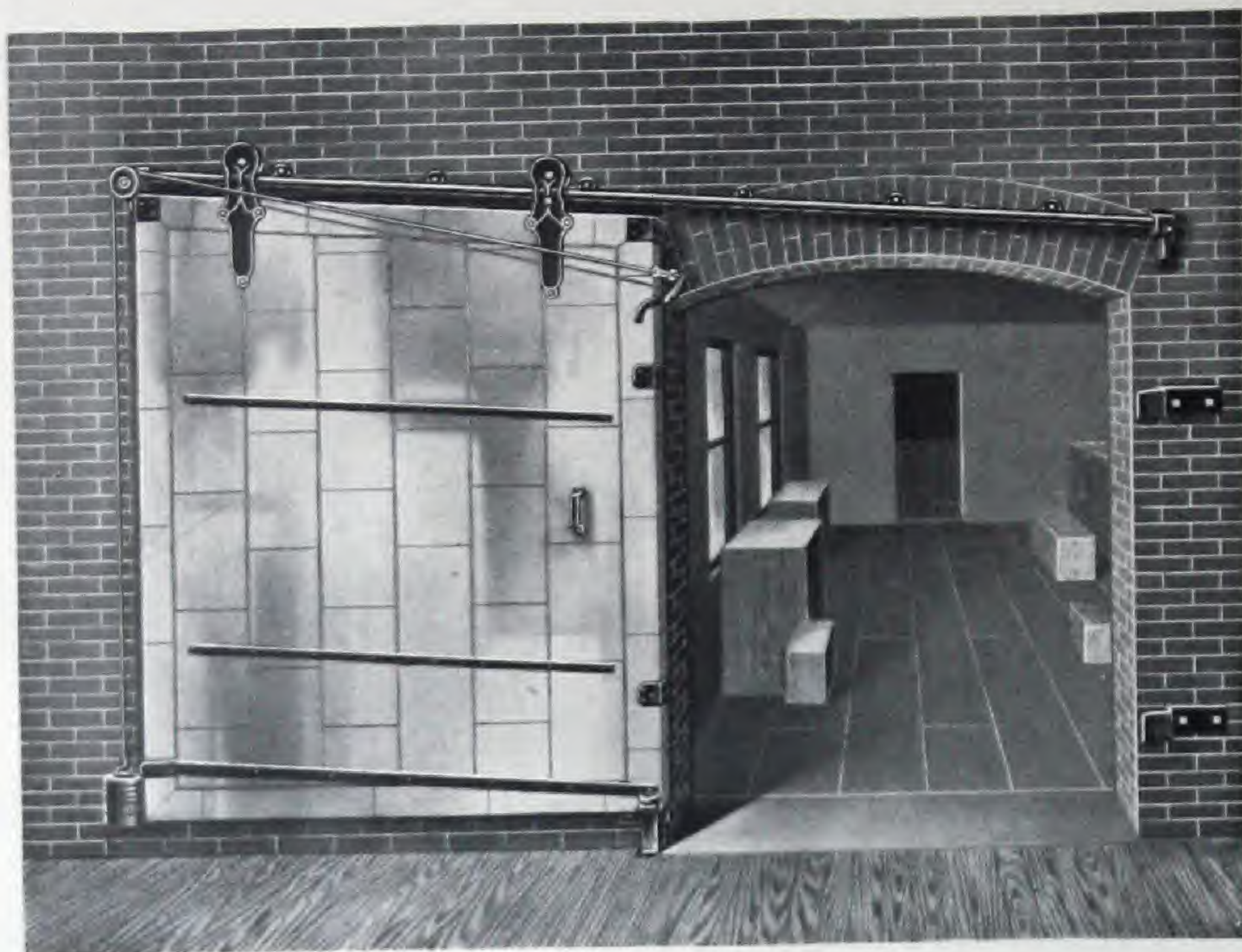
R-W Single Link Round Track Fire Door Fixtures

For Single Sliding Doors Incline Track

R-W No. 646-2 For Two-ply (1- $\frac{3}{4}$ inch) Tin Clad Doors.

R-W No. 646-3 For Three-ply (2- $\frac{5}{8}$ inch) Tin Clad Doors.

R-W No. 1646 For "FyeR-Wall" Sheet Metal Doors.



No. 646 Fire Door Fixtures Applied to Tin Clad Fire Door.

Above hardware is included in list of Fire Door Hardware approved and labeled by National Board of Fire Underwriters.

This fixture is the same style as No. 645 shown on pages 22-25 except that the overhead cord arrangement is omitted. This type has but one fusible link which is exposed in the opening.

DIRECTIONS FOR ORDERING

STATE: First—Number of openings and number of doors; whether doors are on one side or both sides of wall. If latter, mention if fixtures can be bolted together and state thickness of wall. Do not say doors when you mean openings, as doors must lap four inches on each side and at top.

Second—Width and height of opening, (mention width first).

Third—Thickness of doors, if two-ply tin clad (1 $\frac{3}{4}$ inches), three-ply tin clad (2 $\frac{5}{8}$ inches) or "FyeR-Wall" sheet metal doors.

Fourth—Thickness of wall, when wall bolts are required, or when doors are used on both sides of wall, in which case special U Wall plates are required for guide rollers, when walls are less than 12" thick.

Fifth—Distance from edge of opening to walls at right angles, if any. State distances from highest points of openings to nearest obstructions overhead.

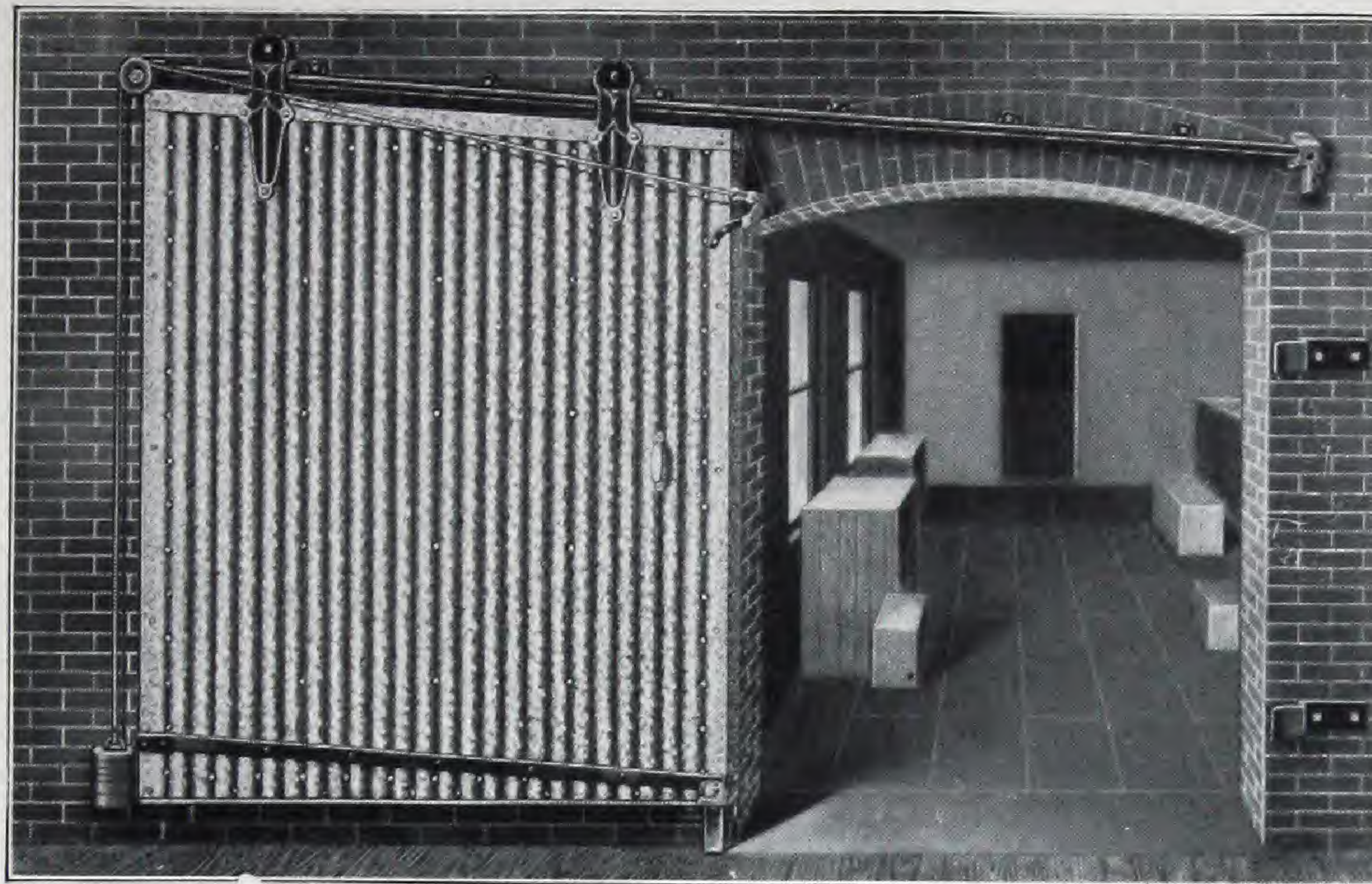
Sixth—If opening is square or arched top.

NOTE: Minimum clearances and special automatic closing arrangements are shown on page 29. Unless otherwise specified Standard Style will be furnished.

Detail of parts shown on pages 20-21. See pages 82-85 for R-W Standard Approved and Labeled Tin-Clad, and R-W "FyeR-Wall" sheet metal doors. Approved hardware suitable for Saino and Merchant & Evans doors furnished when required.



R-W Single Link Round Track Fire Door Fixtures



No. 1646 Fire Door Fixtures Applied to "FyeR-Wall" Sheet Metal Door.

List Price for Nos. 646-2, 646-3 and 1646 Fire Door Fixtures

List price includes Non-Adjustble hangers, track and fixtures complete for doors when used on one side of wall only. If doors are to be used on both sides of wall, double sets will be required and the price will be doubled. Fixtures packed complete with all bolts and screws for attaching parts to door, heavy cast washers for wall bolts and necessary counterbalance weights. Weights are furnished regularly for openings 8' high. If opening is higher, additional weights are required.

Wall bolts are not included, but will be furnished at moderate price if thickness of wall is given.

Width of Opening with 1 pr. Hangers	List Price	Weight per Set, Lbs.	*Width of Opening with 1½ pr. Hangers	List Price	Weight per Set, Lbs.
3 feet	\$17.70	142	6½ feet	\$22.40	185
3½ feet	18.05	149	7 feet	22.70	191
4 feet	18.40	152	7½ feet	23.00	197
4½ feet	18.70	155	8 feet	23.40	201
5 feet	19.05	160	8½ feet	23.70	204
5½ feet	19.40	164	9 feet	24.00	210
6 feet	19.70	170	9½ feet	24.40	214
			10 feet	24.70	218

No. 646-2, No. 646-3 or No. 1646 Automatics only, weight 25 lbs. Per set.....	\$ 3.50
No. 646-2 No. 646-3 or No. 1646 Fixtures only, less Hangers, Track and Brackets; Binder, Chafe and Guide Roll Strips, weight 81 lbs. Per set.....	10.70
†No. 542-C Track only with brackets, for two-ply tin clad doors, weight 2½ lbs. Per foot.....	.34
†No. 542-C Track only with brackets for three-ply tin clad or "FyeR-Wall" sheet metal doors, weight 2¾ lbs. Per foot.....	.34
No. 542-C Hangers only with Back Plates used with No. 646-2 Hardware, (page 52), weight 25½ lbs. Per pair	4.20
No 542-C Hangers only used with No. 646-3 Hardware, (page 52), weight 22 lbs. Per pair.....	4.20
No. 742 Hangers with Back Plates used with No. 1646 Hardware, (page 52), weight 25½ lbs. Per pair....	4.20
No. 642-5 Adjustable Hangers only, (page 52), Weight 32 lbs. Per pair.....	8.50

*For openings, (not doors) over 6' wide, Underwriters require three hangers.

†Length of track equals twice width of opening plus 15½".

Discount.....



Packing List for R-W Nos. 646-2, 646-3 and No. 1646 Fire Door Fixtures—Standard Style

646-2	646-3	1646	DESCRIPTION	List Price
1	..	..	No. 70-1 Flush Pull, each.....	\$.20
..	1	..	No. 70-2 Flush Pull, each.....	.25
1	..	..	No. 71-1 Bow Handle, each.....	.10
..	1	..	No. 71-2 Bow Handle, each.....	.15
..	..	1	No. 71-3 Bow Handle, each.....	.20
..	..	1	No. 71-4 Bow Handle, each.....	.25
*	*	*	No. 102-SC Sash Cord. (As required), per foot.....	.05
*	*	*	No. 102-61 Cast Washers. (See table below). Not required when doors are used on both sides of wall, each.....	.15
8	8	..	No. 102-72 Bumper shoes, each.....	.10
1	..	..	No. 102-80-2 Guide Roller. (For angle iron sills only), each.....	2.00
..	1	1	No. 102-80-3 Guide Roller. (For angle iron sills only), each.....	2.00
2	2	..	No. 102-82 Binder Strip. Length equals width of opening less 4", each.....	.40
1	1	1	No. 102-88 Guide Roll Strip. Length equals width of opening plus 3". Plus 6" for 1646, each.....	.80
2	2	..	No. 102-89 Chafe Strip. Length equals width of opening less 4", each.....	.40
1	1	1	No. 102-91 Weight Holder, each.....	.15
2	..	..	No. 102-95 No. 2 Binders, each.....	.80
..	2	2	No. 102-95 No. 3 Binders, each.....	.80
1	1	1	No. 102-97 Link Bracket with No. 96 Link attached, complete.....	.55
1	1	1	No. 102-98 Wedge, each.....	.10
*	*	*	No. 102-99 No. 1 Lightweight. (According to size of opening), each.....	.25
*	*	*	No. 102-99 No. 2 Heavyweights. (According to size of opening), each.....	.75
1	..	..	†No. 156-2 Guide Roller. (Omit for angle iron sills), each.....	2.00
1	1	1	*No. 156-3 Guide Roller. (Omit for angle iron sills), each.....	2.00
1 Pr.	1 Pr.	..	No. 542-C Hangers. (Openings over 6' wide require 1½ pr.), per pair.....	4.20
1	1	1	No. 542-C Track. Length equals twice width of opening plus 15½ inches, per foot.....	.34
2	..	..	No. 542-C Back Plates. (Openings over 6' wide require 3), each.....	.70
*	..	..	No. 542-CB-2 Center Brackets (16c each) and No. 542-CJ-2 Joint Brackets (See table below), each.....	.30
..	*	*	No. 542-CB-3 Center Brackets (16c each) and No. 542-CJ-3 Joint Brackets (See table below), each.....	.30
1	..	..	No. 645-87-2 Combination End Bracket and Bumper. Right or Left, each.....	1.10
..	1	1	No. 645-87-3 Combination End Bracket and Bumper. Right or Left, each.....	1.10
1	..	..	No. 646-86-2 Combination End Bracket and Bumper. Right or Left.....	1.10
..	1	1	No. 646-86-3 Combination End Bracket and Bumper. Right or Left.....	1.10
..	..	1 Pr.	No. 742 Hangers with back plates. (Openings over 6' wide require 1½ pr.), per pair.....	4.20
..	..	1	No. 1102-93 Rear Binder Pocket, each.....	1.00
..	..	1	No. 1102-94 Rear Binder Hook, each.....	.80
1	1	1	Package Screws and Bolts.....	

†No. 56-2 Boston Guide Roller may be substituted for this item if desired.

*No. 56-3 Boston Guide Roller may be substituted for this item if desired.

Table of No. 542C-2 and No. 542C-3 Brackets and No. 102-61 Washers for Above Fixtures.

Width of Opening	Number of Center and Joint Brackets	*Number of Washers
Up to 3' 2"	4	11
3' 3" to 4' 8"	5	12
4' 9" to 6' 0"	6	13
6' 1" to 6' 11"	8	15
7' 0" to 8' 8"	9	16
8' 9" to 10' 0"	10	17
10' 1" to 10' 5"	12	19
10' 6" to 10' 11"	13	20
	Fixtures Only Require	7

No. 1646 Fixtures require one more washer than shown above.

Wall Bolt List for No. 646-2, No. 646-3 and No. 1646 Fire Door Fixtures.

Wall bolts are not furnished with sets of fixtures regularly but will be furnished at prevailing market prices when thickness of wall is given and customer requests them. The table below gives the number and size of bolts required for various sized openings. Note that the number of bolts is the same for hardware installed on one or both sides of wall.

NUMBER OF ¾" BOLTS REQUIRED FOR VARYING WIDTHS OF DOORWAY OPENINGS

Fixture bolts are used to fasten.....	up to 3' 2" wide	3' 3" to 4' 8"	4' 9" to 6' 0"	6' 1" to 6' 11"	7' 0" to 8' 8"	8' 9" to 10' 0"	10' 1" to 10' 5"	10' 6" to 10' 11"	LENGTH OF BOLTS REQUIRED FOR SETS INSTALLED	
									On One Side of Wall	On Both Sides of Wall
Binders.....	4	4	4	4	4	4	4	4	Wall thickness plus 2"	Wall thickness plus 2"
*Guide Rollers.....	1	1	1	1	1	1	1	1	Wall thickness plus 1"	Wall thickness minus ¾"
Front Track Brackets.....	1	1	1	1	1	1	1	1	Wall thickness plus (A)	Wall thickness plus (B)
Center Track Brackets.....	4	5	6	8	9	10	12	13	Wall thickness plus 2"	Wall thickness plus 2"
Rear Track Brackets.....	1	1	1	1	1	1	1	1	Wall thickness plus (C)	Wall thickness plus (D)
Rear Binder Hook (in No. 1646 set only)	1	1	1	1	1	1	1	1	Wall thickness plus 1"	Wall thickness minus ¾"
Total Bolts in No. 646-2 and No. 646-3 Sets.....	11	12	13	15	16	17	19	20		
Total Bolts in No. 1646 sets.....	12	13	14	16	17	18	20	21		

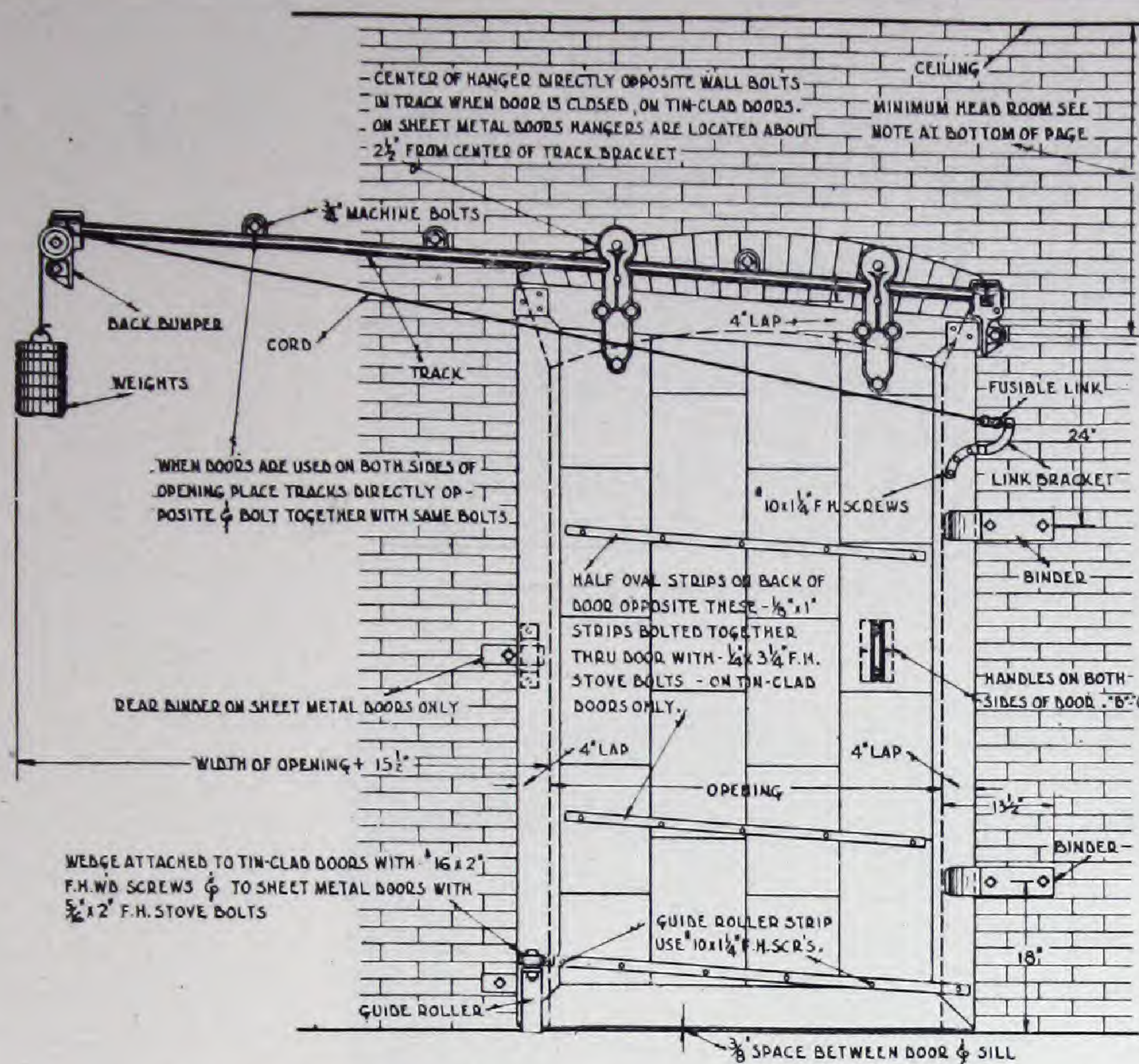
*Wall Bolt not required when No. 102-80 Guide Rollers are used.

(A) 5" for 2-ply tin clad doors. 2¼" for 3-ply tin clad or "FyeR-Wall" sheet metal doors.

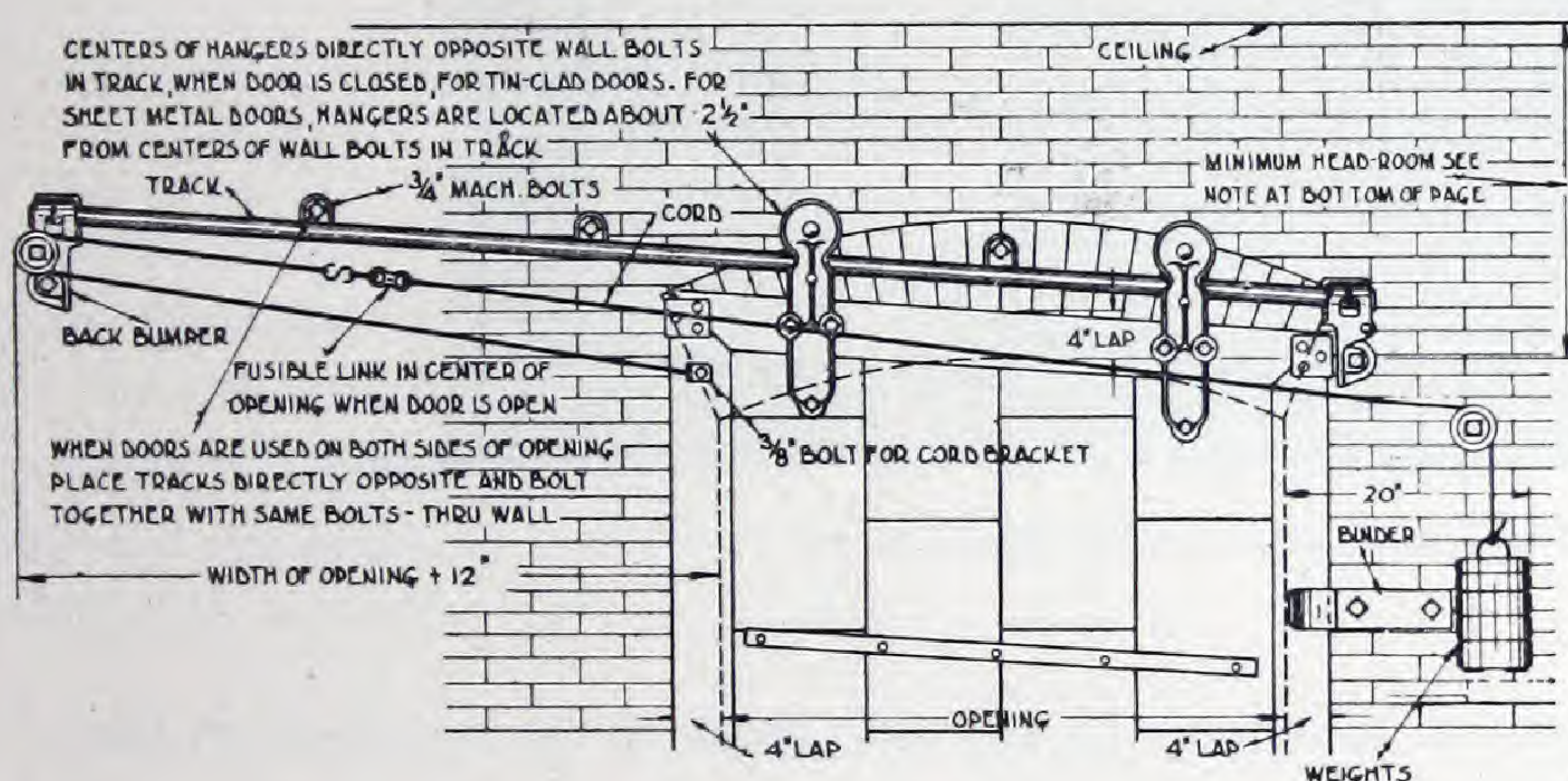
(B) 7½" for 2-ply tin clad doors. 2¼" for 3-ply tin clad or "FyeR-Wall" sheet metal doors.

(C) 6½" for 2-ply tin clad doors. 2¼" for 3-ply tin clad or "FyeR-Wall" sheet metal doors.

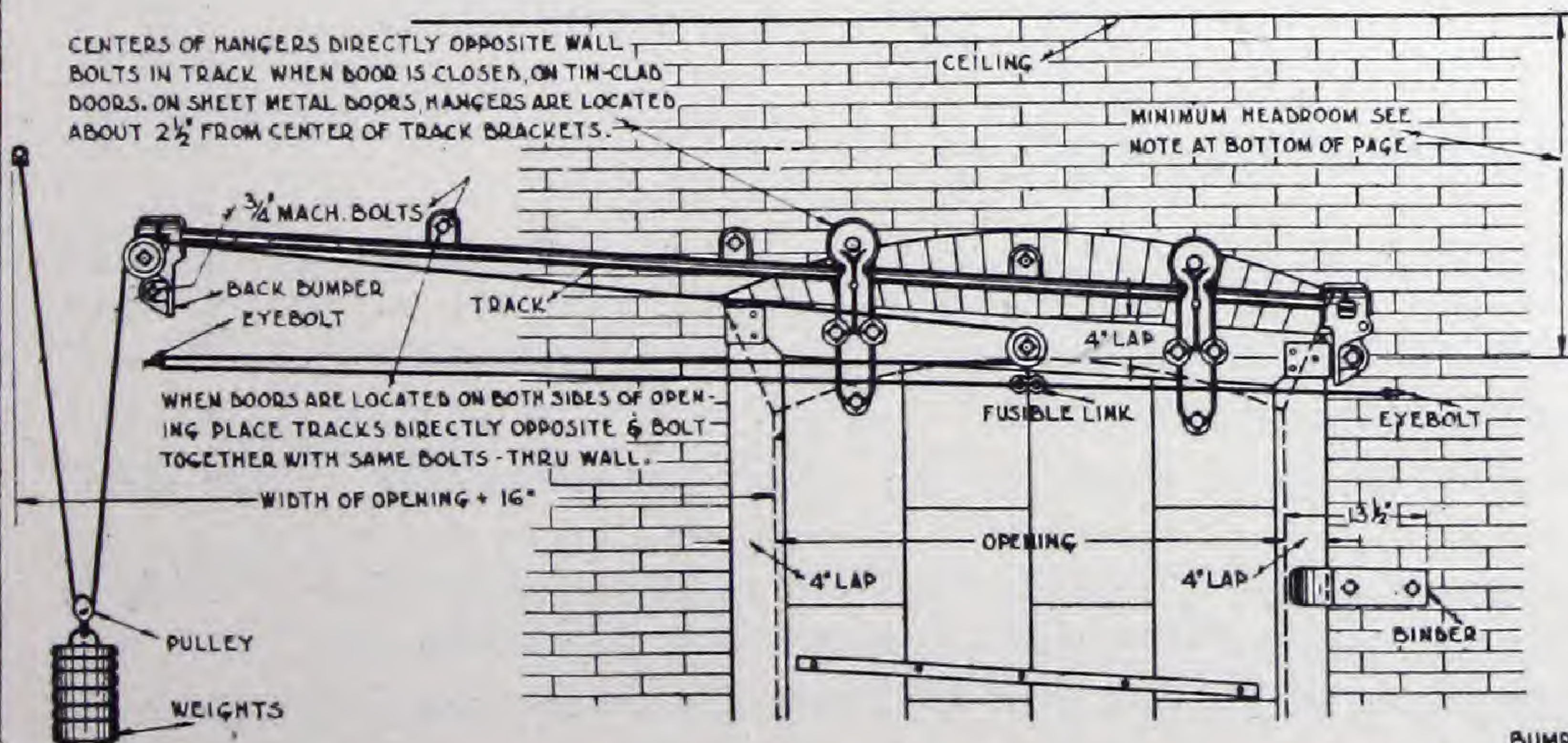
(D) 11" for 2-ply tin clad doors. 2¼" for 3-ply tin clad or "FyeR-Wall" sheet metal doors.



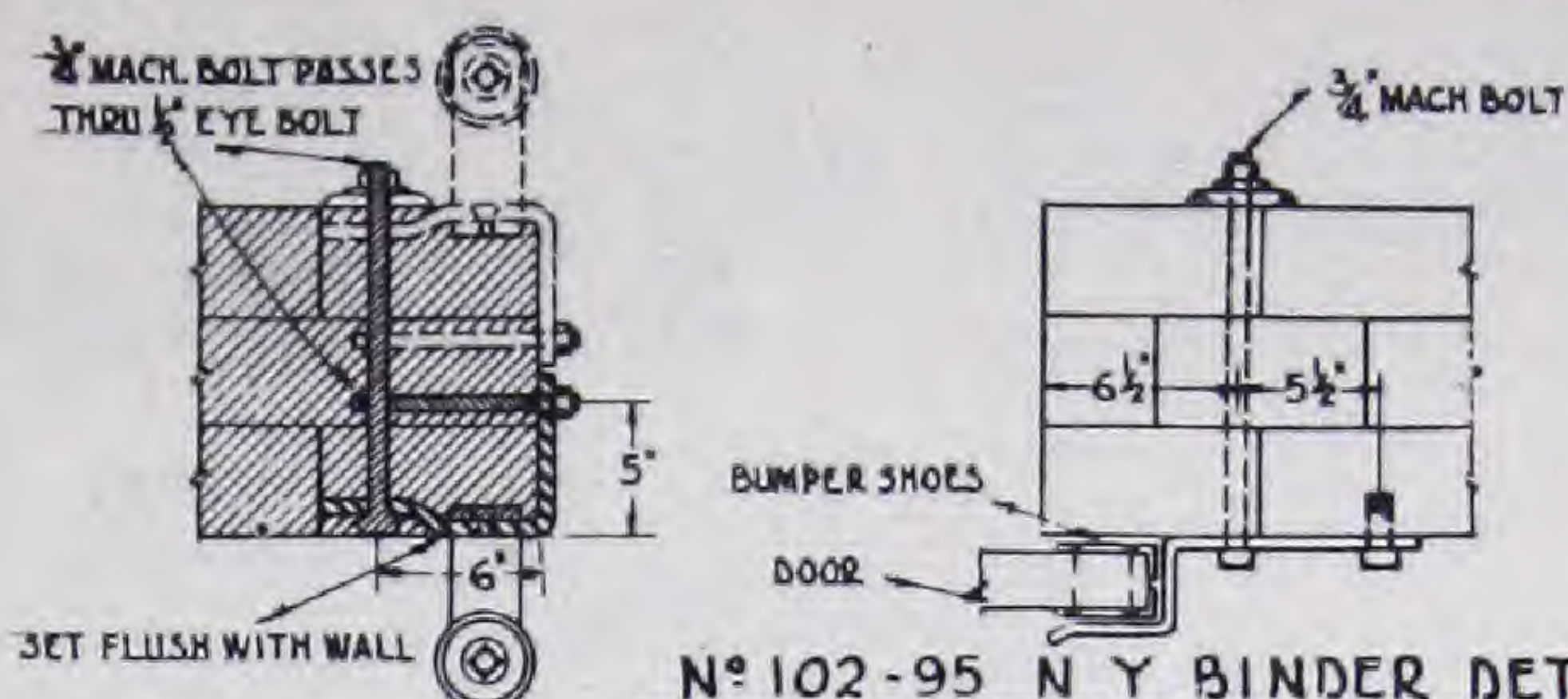
**RICHARDS-WILCOX No. 646 FIRE DOOR FIXTURES
STANDARD STYLE**



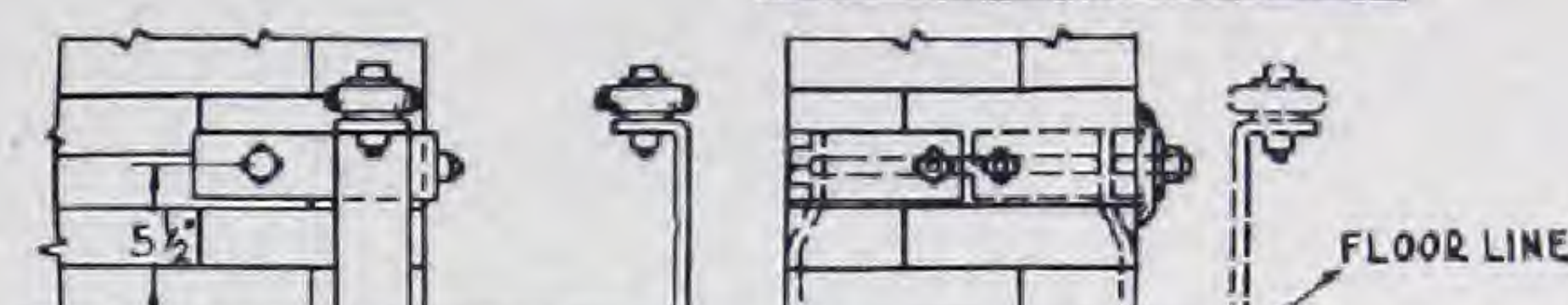
**RICHARDS-WILCOX No. 646 FIRE DOOR FIXTURES
CHICAGO STYLE**



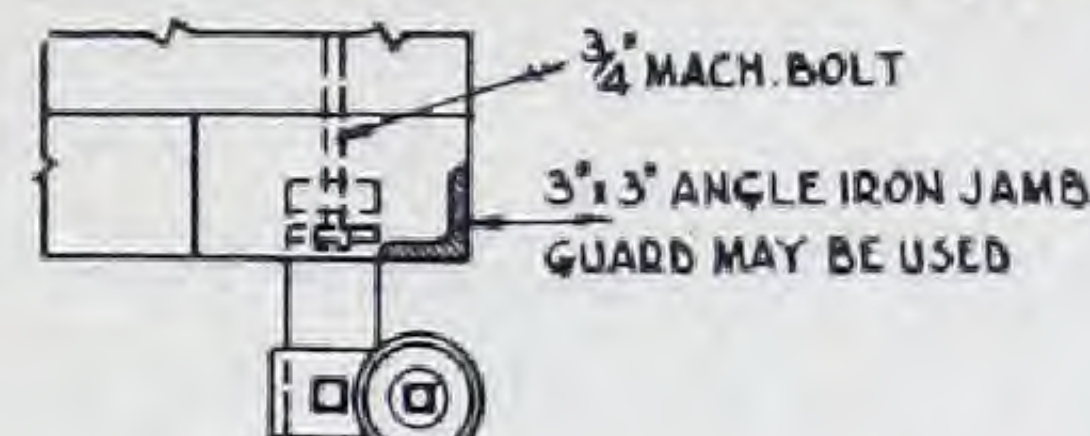
**RICHARDS-WILCOX No. 646 FIRE DOOR FIXTURES
CINCINNATI STYLE**



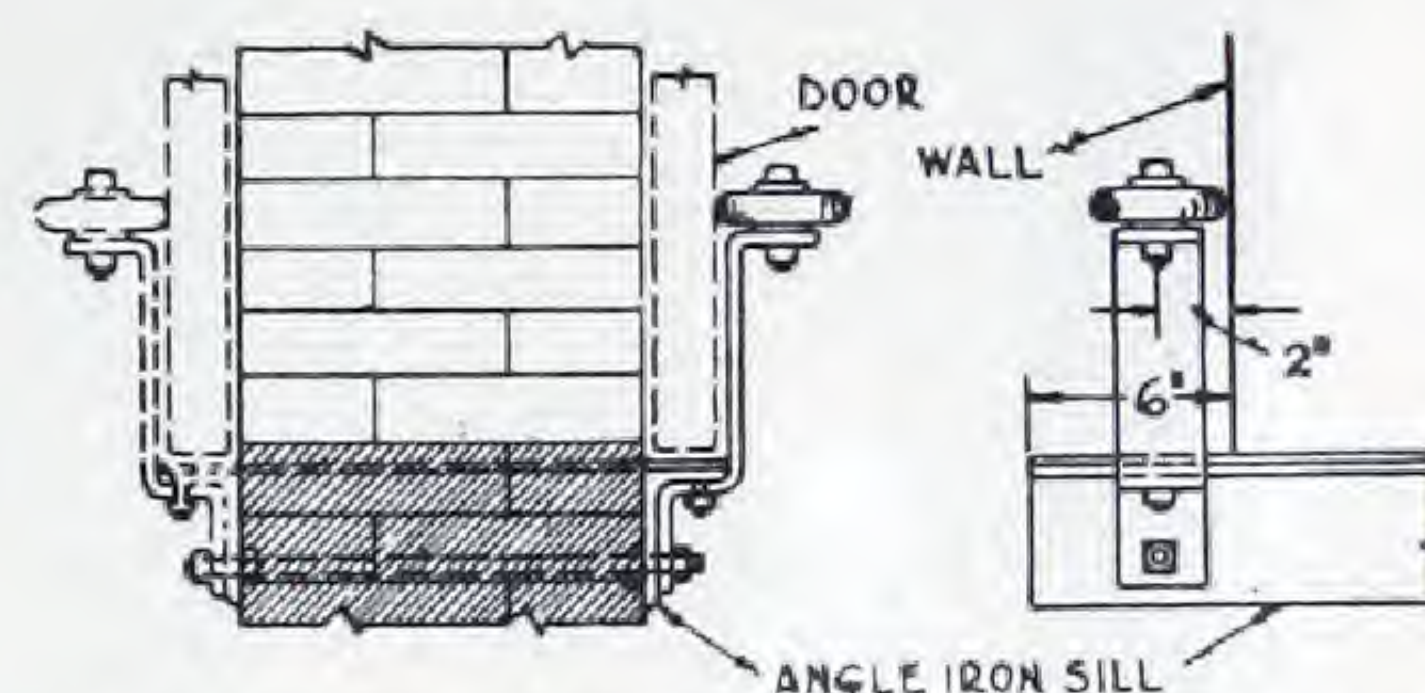
**No. 102-95 N.Y. BINDER DETAIL
NEW YORK STYLE**



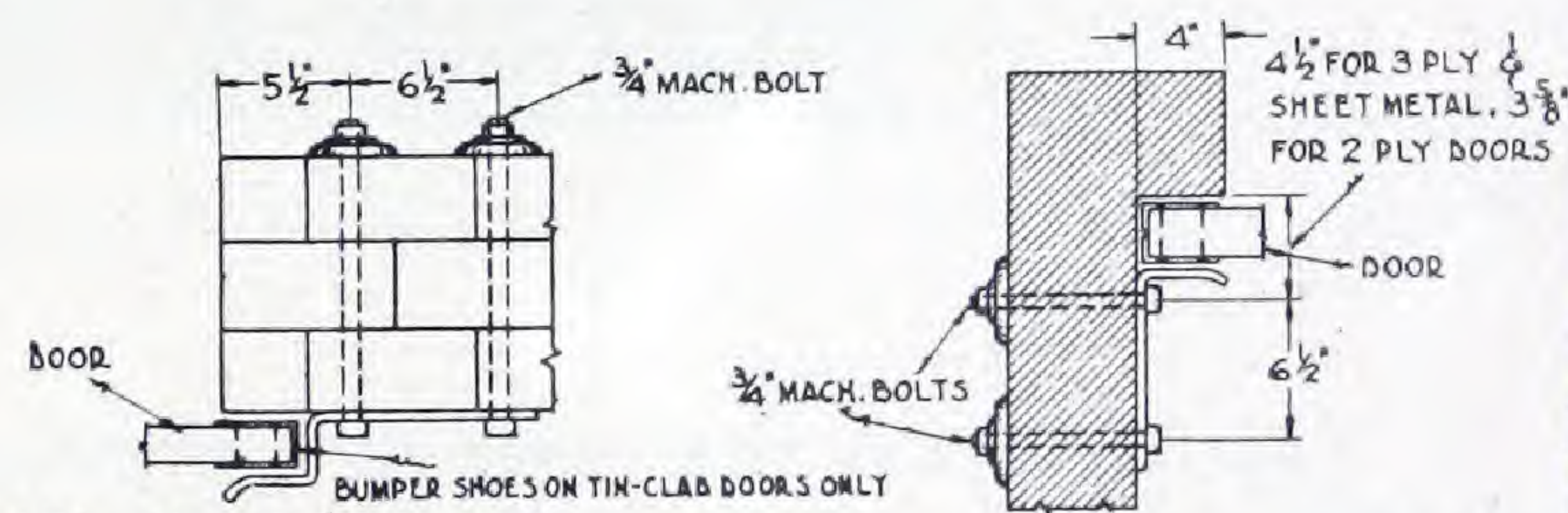
**No. 156 GUIDE ROLLER DETAILS
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING**



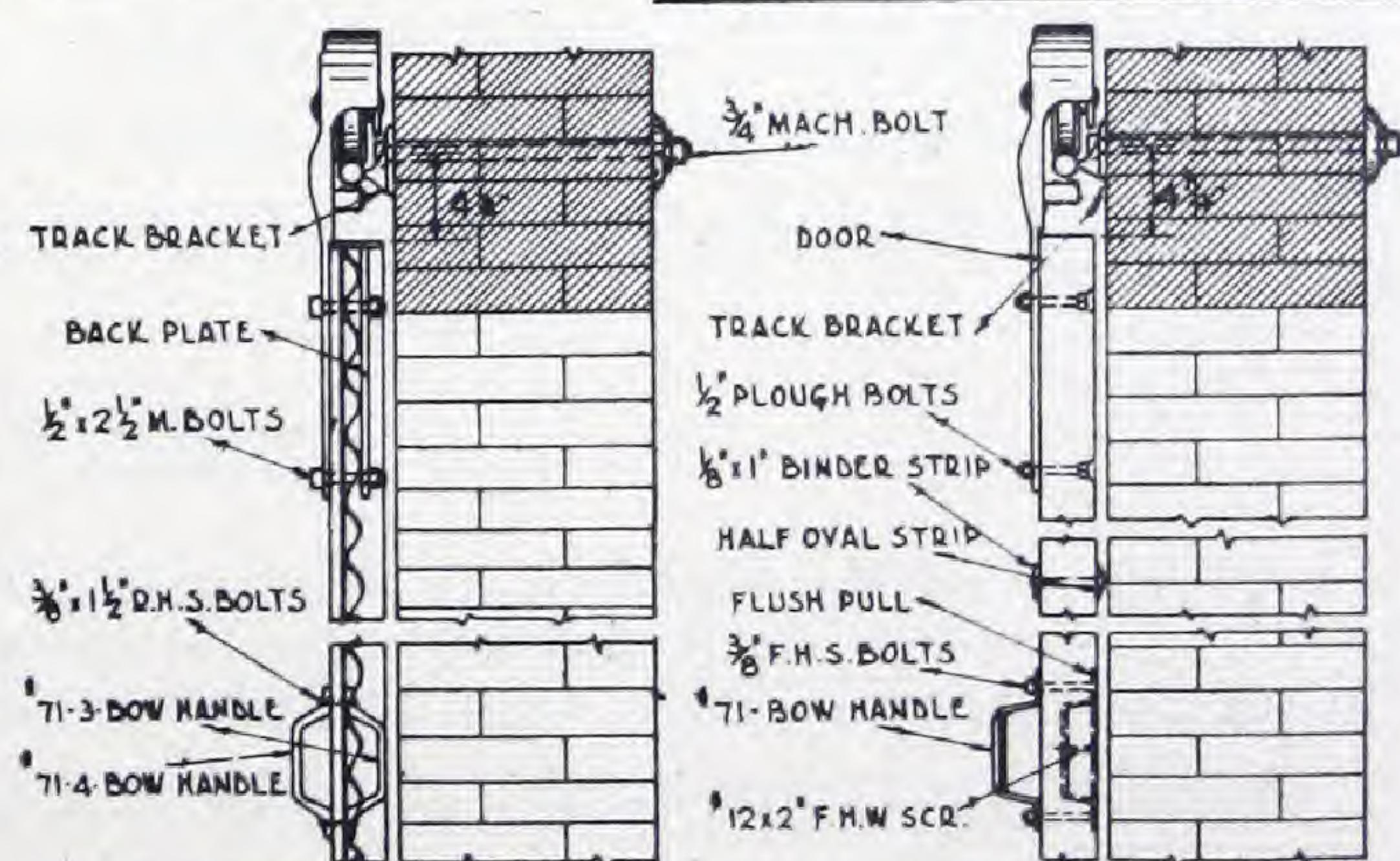
**No. 56 BOSTON GUIDE ROLLER DETAIL
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING**



**No. 102-80 GUIDE ROLLER DETAIL
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING**

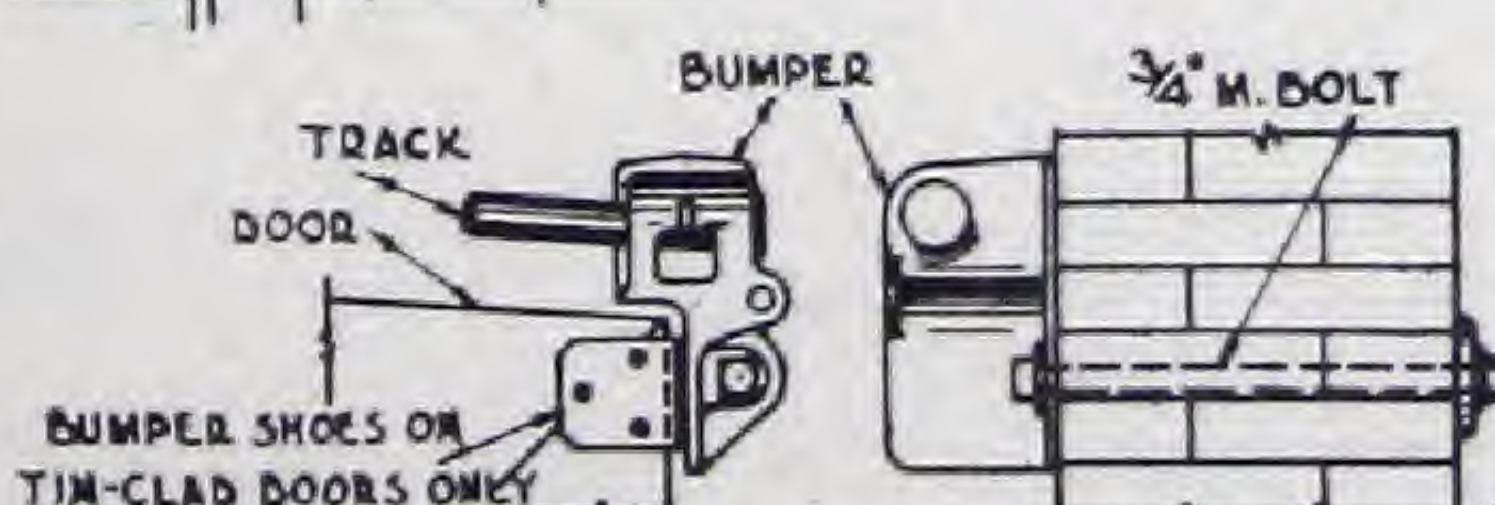


No. 102-95 BINDER DETAIL No. 102-94 RIGHT ANGLE BINDER

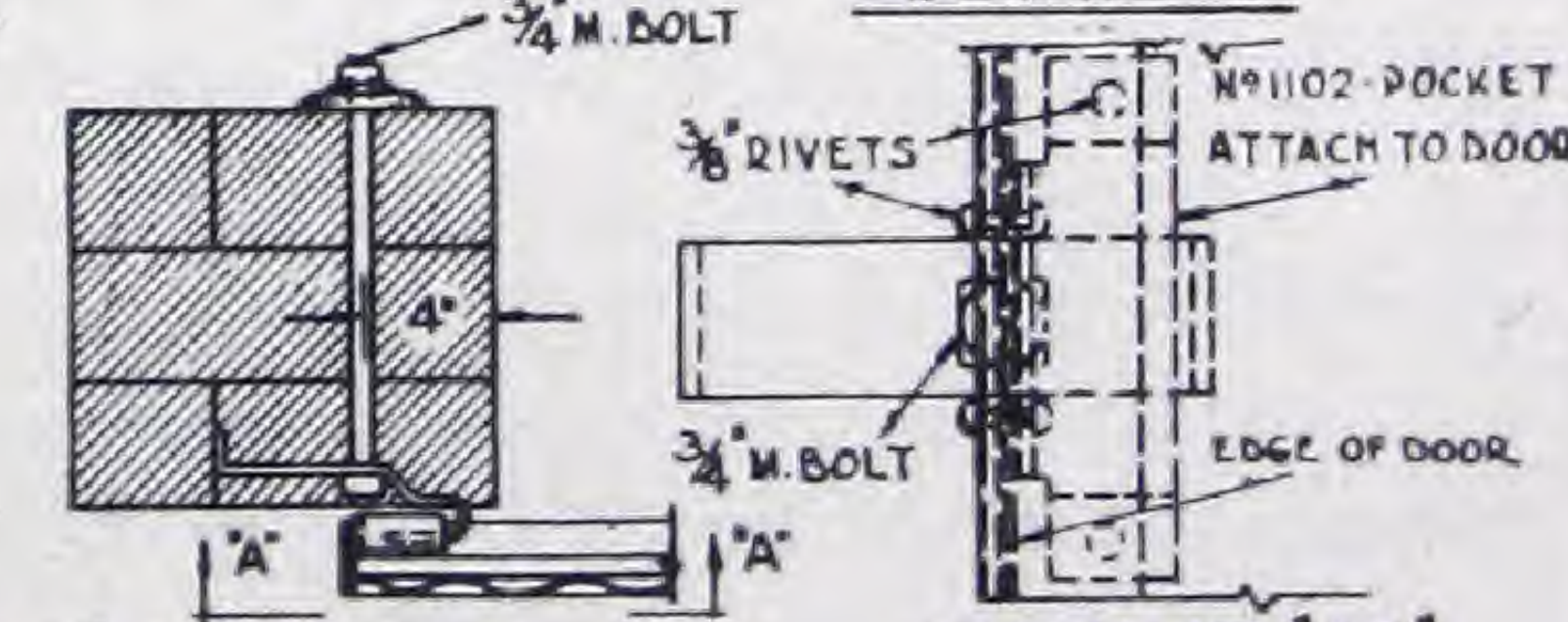


**SECT. THRU DOOR & WALL
SHEET METAL DOOR
DETAIL 'B'**

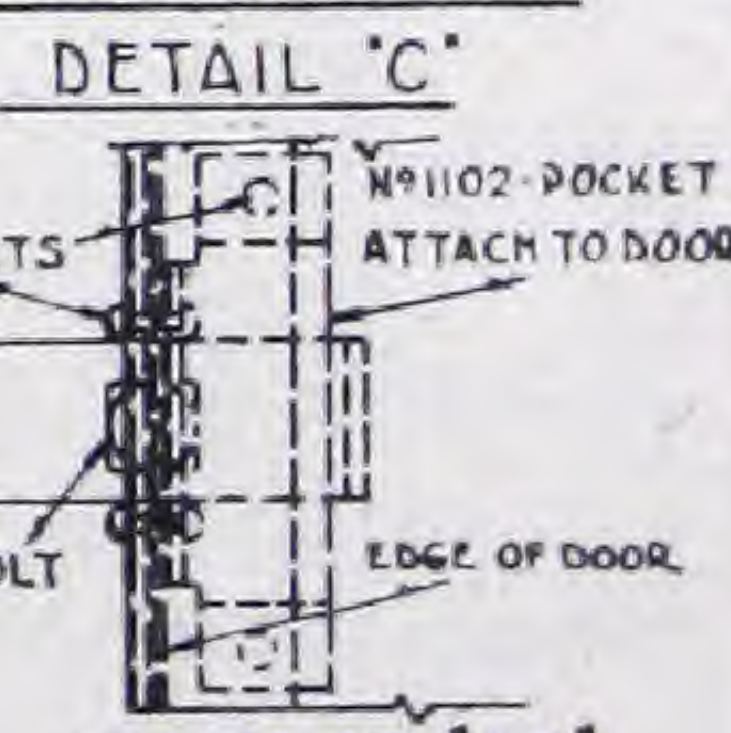
**SECT. THRU DOOR & WALL
TIN-CLAD DOOR
DETAIL 'C'**



FRONT BUMPER DETAIL



**REAR BINDER DETAIL
SHEET METAL DOOR**



**VIEW AT 'AA'
OF REAR BINDER**

Square top openings require 12" of head-room for Non-Adjustable hangers, at edge of openings toward which the door slides in closing, plus 3/4" for each foot of track. Arched top openings require 12" head-room above the top of arch, plus 3/4" for each foot the track extends beyond the center of opening. Add 2" for adjustable hangers.

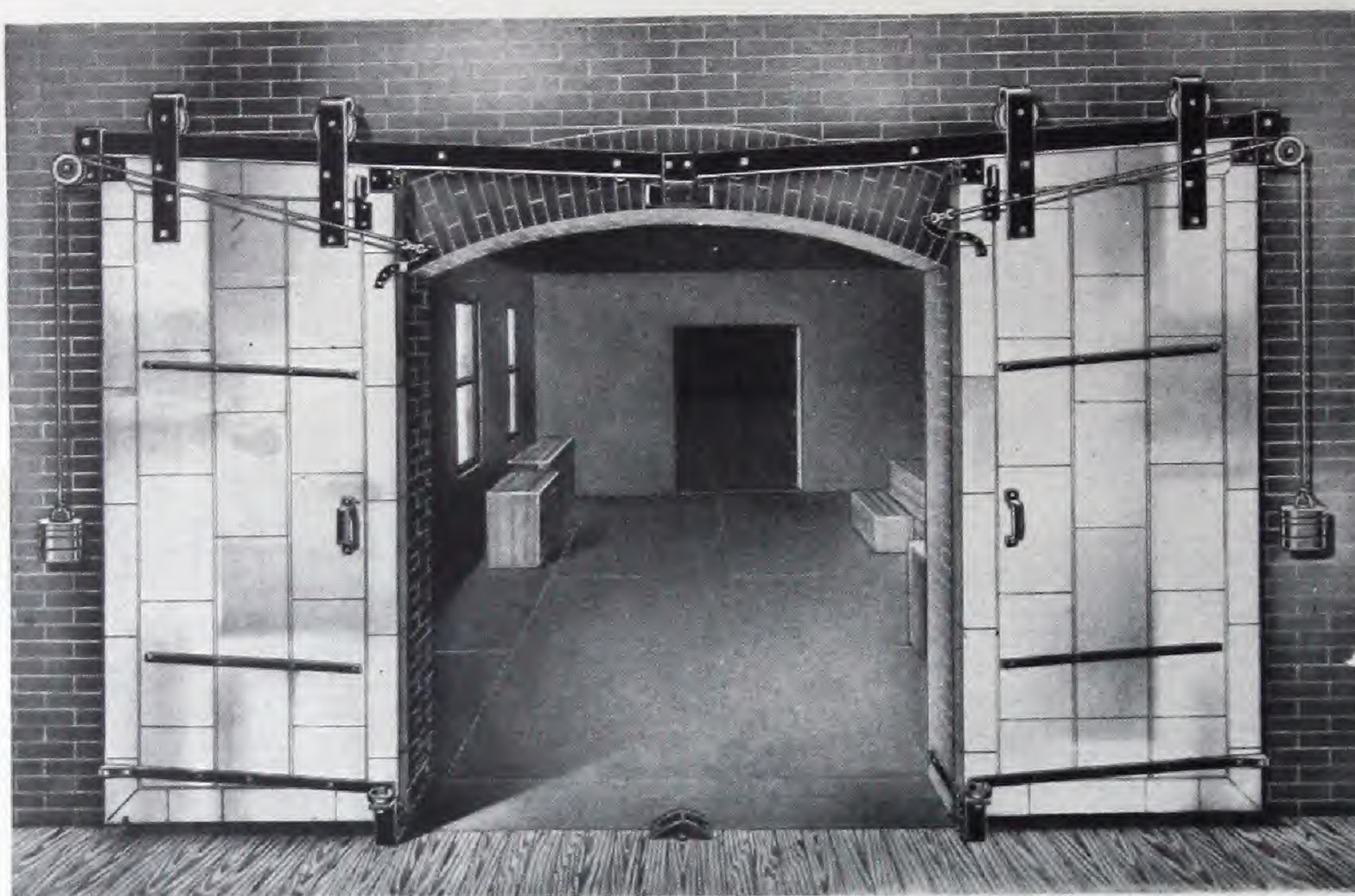
R-W Single Link Flat Track Fire Door Fixtures

For Sliding Doors in Pairs, Incline Track.

R-W No. 204-2 For Two-ply (1- $\frac{3}{4}$ inch) Tin Clad Doors.

R-W No. 204-3 For Three-ply (2- $\frac{5}{8}$ inch) Tin Clad Doors.

R-W No. 1204 For "FyeR-Wall" Sheet Metal Doors.



No. 204 Fire Door Fixtures Applied to Tin Clad Doors.

This fixture is the same as No. 201 shown on page 16 except that it is applied to pairs of doors.

Designed to meet special conditions, such as not sufficient space on one side to slide a large door, or if an overhead carrier system track passes through the opening.

This type has one fusible link on each door, and both are exposed in the opening.

DIRECTIONS FOR ORDERING

STATE: First—Number of openings and number of doors; whether doors are on one side or both sides of wall. If latter, mention if fixtures can be bolted together and state thickness of wall. Do not say doors when you mean openings, as doors must lap four inches on each side and at top.

Second—Width and height of opening, (mention width first).

Third—Thickness of doors, if two-ply tin clad (1 $\frac{1}{2}$ inches), three-ply tin clad (2 $\frac{5}{8}$ inches) or "Fyer-Wall" sheet metal doors.

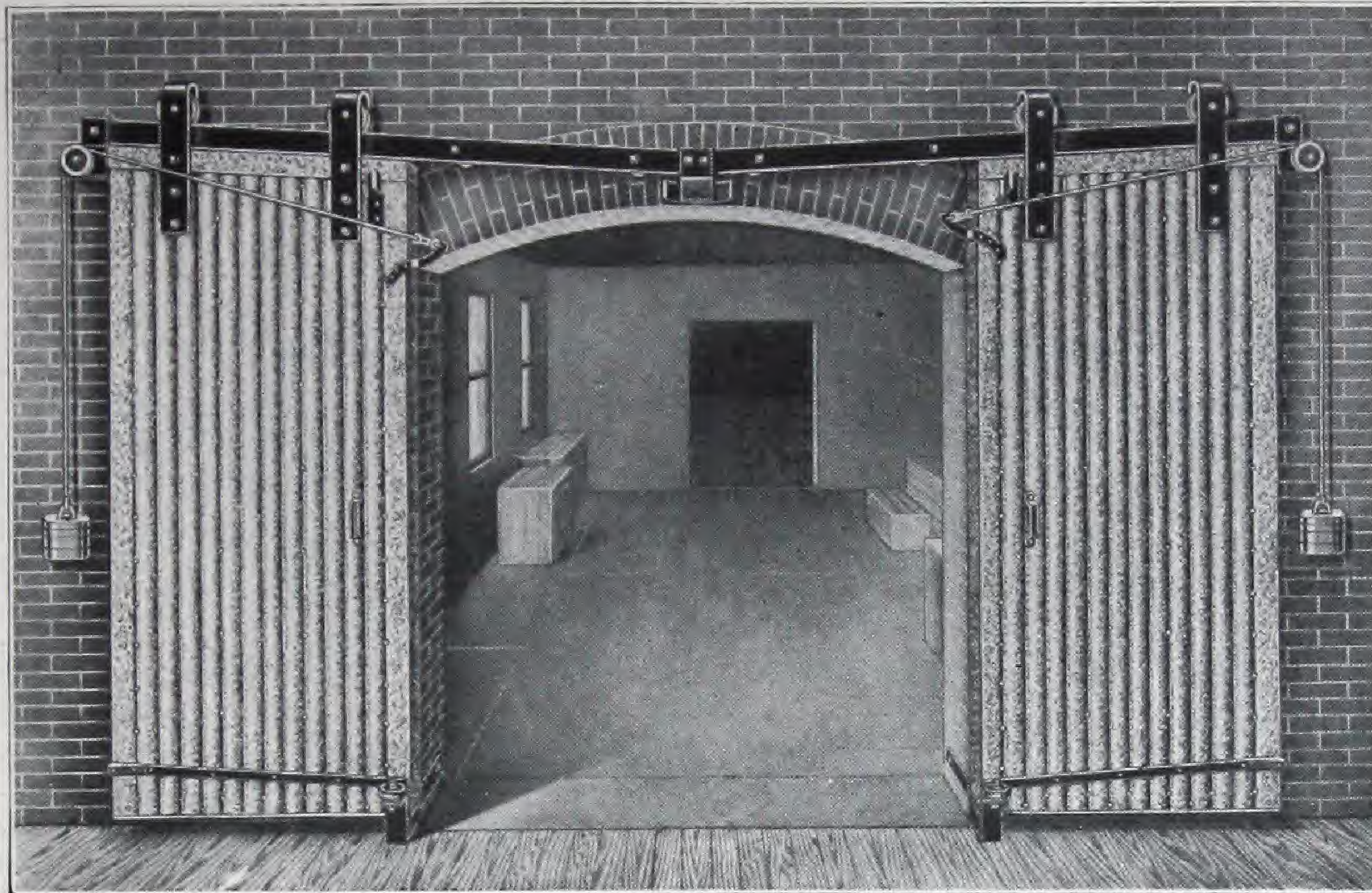
Fourth—Thickness of wall, when wall bolts are required, or when doors are used on both sides of wall, in which case special U Wall plates are required for guide rollers, when walls are less than 12" thick.

Fifth—Distance from edge of opening to walls at right angles, if any. State distances from highest points of openings to nearest obstructions overhead.

NOTE: Minimum clearances and special automatic closing arrangements are shown on page 33. Unless otherwise specified Standard Style will be furnished.

Detail of parts shown on pages 20-21. See pages 82-85 for R-W Standard Approved and Labeled Tin-Clad, and R-W "FyeR-Wall" sheet metal doors. Hardware suitable for Saino and Merchant & Evans doors furnished when required.

R-W Single Link Flat Track Fire Door Fixtures



No. 1204 Fire Door Fixtures Applied to "FyeR-Wall" Sheet Metal Doors.

List Price for Nos. 204-2, 204-3 and 1204 Fire Door Fixtures.

The following price list includes non-adjustable hangers, track and fixtures complete for doors when used on one side of wall only. If doors are to be used on both sides of wall, double sets will be required and the price will be doubled. Fixtures packed complete with all bolts and screws for attaching parts to the door, heavy cast washers for wall bolts and necessary counter balance weights. Weights are furnished regularly for openings 8' high. If opening is higher, additional weights are required.

Wall bolts are not included, but will be furnished at moderate price if thickness of wall is given.

Width of Opening with 2 pr. Hangers	List Price	Weight per Set, Lbs.	Width of Opening with 2 pr. Hangers	List Price	Weight per Set, Lbs.
3 feet	\$31.40	230	7 feet	\$37.40	292
3½ feet	32.10	235	7½ feet	38.10	297
4 feet	32.80	241	8 feet	38.80	303
4½ feet	33.50	258	8½ feet	39.50	308
5 feet	34.20	264	9 feet	40.20	326
5½ feet	34.90	269	9½ feet	40.90	331
6 feet	35.60	275	10 feet	41.60	337
6½ feet	36.70	286			

No. 204-2, 204-3 or No. 1204 Automatics only, weight 31 lbs. Per set	\$ 7.00
No. 204-2, 204-3 or No. 1204 Fixtures only, less Hangers, Track and Brackets; Binder, Chafe and Guide Roll Strips, weight 100 lbs. Per set.....	17.50
No. 204-84 Track only, with brackets, weight 4½ lbs. Per foot .....	.40
(Length of each track equals width of opening plus 8".)	
No. 102-2 Hangers only, used with No. 204-2 Hardware, (page 52), weight 30 lbs. Per pair.....	4.10
No. 102-3 Hangers only, used with No. 204-3 Hardware (page 52), weight 30 lbs. Per pair.....	4.10
No. 1102 Hangers with Back Plates used with No. 1204 Hardware, (page 52), weight 35 lbs. Per pair....	4.10
No. 202 Adjustable Hangers only, (page 52), weight 36 lbs. Per pair	7.00
Double Link Fixtures can be furnished at, per set, additional	4.50

Discount.....



Packing List For R-W No. 204-2, 204-3 and No. 1204 Fire Door Fixtures —Standard Style

204-2	204-3	1204	DESCRIPTION	List Price
2	..	..	No. 70-1 Flush Pull, each.....	\$.20
..	2	..	No. 70-2 Flush Pull, each.....	.25
2	..	..	No. 71-1 Bow Handles, each.....	.10
..	2	..	No. 71-2 Bow Handles, each.....	.15
..	..	2	No. 71-3 Bow Handles, each.....	.20
..	..	2	No. 71-4 Bow Handles, each.....	.25
*	*	*	No. 102-SC Sash Cord. (As required). Per foot.....	.05
2 Pr.	..	..	No. 102-2 Hangers, per pair.....	4.10
..	2 Pr.	..	No. 102-3 Hangers, per pair.....	4.10
*	*	*	No. 102-61 Cast Washers. (See table below), each.....	.15
12	12	..	No. 102-72 Bumper Shoes, each.....	.10
2	..	..	No. 102-80-2 Guide Rollers. (For Angle Iron Sills Only), each.....	2.00
..	2	2	No. 102-80-3 Guide Rollers. (For Angle Iron Sills Only), each.....	2.00
4	4	..	No. 102-82 Binder Strips. Length equals one-half width of opening less 4", each.....	.40
*	*	*	No. 102-85 Cone Brackets. (See table below), each.....	.20
2	2	2	No. 102-88 Guide Roll Strip. Length equals one-half width of opening, less 1". (Plus 2" for 1204), each.....	.80
4	4	..	No. 102-89 Chafe Strips. Length equals one-half width of opening less 4", each.....	.40
2	2	2	No. 102-91 Weight Holder, each.....	.15
2	2	2	No. 102-97 Link Brackets with No. 96 links attached, complete.....	.55
2	2	2	No. 102-98 Wedges, each.....	.10
*	*	*	No. 102-99 No. 1 Lightweights. (According to size of opening), each.....	.25
*	*	*	No. 102-99 No. 2 Heavyweights. (According to size of opening), each.....	.75
2	..	..	†No. 156-2 Guide Rollers. (Omit for Angle Iron Sills), each.....	2.00
..	2	2	*No. 156-3 Guide Rollers. (Omit for Angle Iron Sills), each.....	2.00
1	..	..	No. 171-2 Center Floor Stop, each.....	.65
..	1	..	No. 171-3 Center Floor Stop, each.....	.75
2	2	2	No. 201-86 Rope Pulley and Back Bumpers, complete.....	1.50
1	1	1	No. 204-61 Double Washer, each.....	.20
2	2	2	No. 204-84 Track. Length equals width of opening plus 8", per foot.....	.40
2	2	2	No. 204-94 Center Bumpers. One right and one left, each.....	.30
1	..	..	No. 204-95-2 Center Binder, each.....	.80
..	1	1	No. 204-95-3 Center Binder, each.....	.80
..	..	2 Pr.	No. 1102 Hangers with backplates, per pair.....	4.10
..	..	4	No. 1102-90 Track Binders, each.....	1.00
..	..	2	No. 1102-93 Rear Binder Pockets, each.....	1.00
..	..	2	No. 1102-94 Rear Binder Hooks, each.....	.80
1	1	1	Package Screws and Bolts	

†No. 56-2 Boston Guide Roller may be substituted for this item if desired.

*No. 56-3 Boston Guide Roller may be substituted for this item if desired.

Table of No. 102-85 Cone Brackets and No. 102-61 Cast Washers For Above Fixtures.

Width of Opening	Number of Brackets	*Number of Washers
4' 0" to 4' 5"	8	8
4' 6" to 9' 8"	10	10
9' 9" to 10' 6"	12	12
10' 7" to 13' 0"	14	14
		Fixtures only require 2

No 1204 Fixtures require two more washers than shown above.

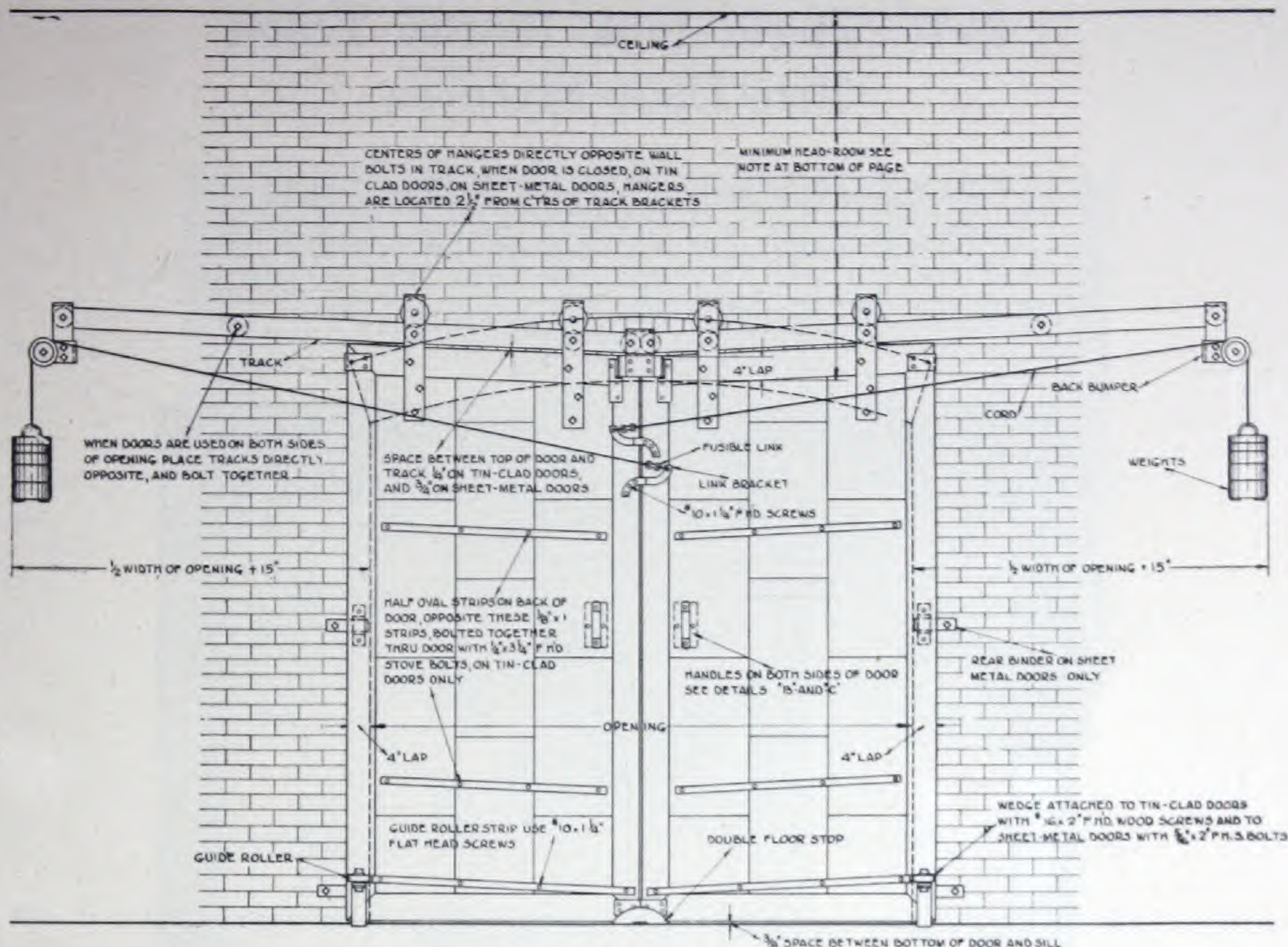
Wall Bolt List for Nos. 204-2, 204-3 and 1204 Fire Door Fixtures.

Wall bolts are not furnished with sets of fixtures regularly, but will be furnished at prevailing market prices when thickness of wall is given and customer requests them. The table below gives the number and size of bolts required for various sized openings. Note that the number of bolts is the same for hardware installed on one or both sides of wall.

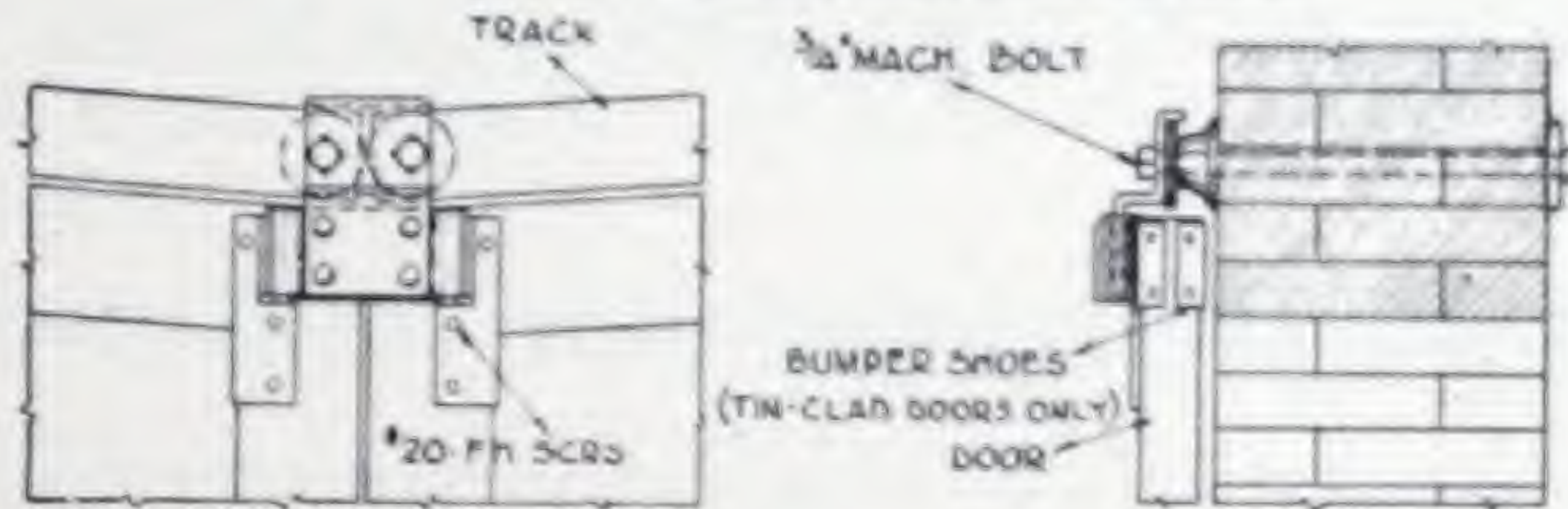
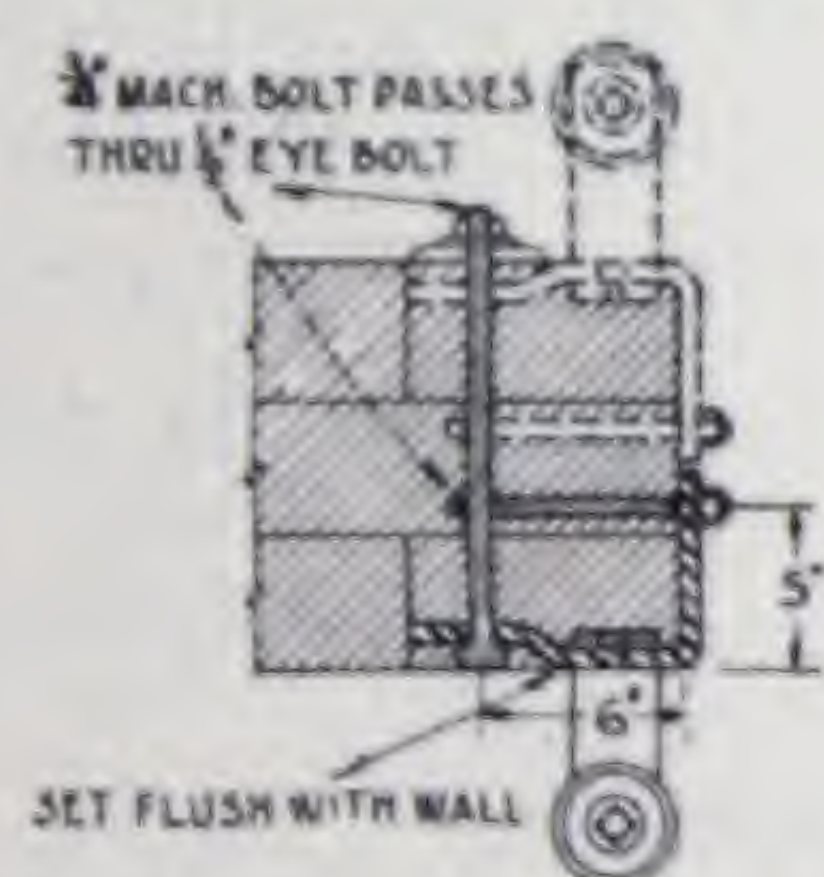
NUMBER OF 3/4" BOLTS REQUIRED FOR VARYING WIDTHS OF DOORWAY OPENINGS

Fixtures Bolts are used to fasten.....	Opening				LENGTH OF BOLTS REQUIRED FOR SETS INSTALLED	
	4' 0" to 4' 5"	4' 6" to 9' 8"	9' 9" to 10' 6"	10' 7" to 13' 0"	On One Side of Wall	On Both Sides of Wall
*Guide Rollers.....	2	2	2	2	Wall thickness plus 1"	Wall thickness minus 3/4"
Center Track Brackets.....	6	8	10	12	Wall thickness plus 4"	Wall thickness plus 5"
End Track Brackets.....	2	2	2	2	Wall thickness plus 4"	Wall thickness plus 6"
Rear Binder Hook (in 1204 set only)....	2	2	2	2	Wall thickness plus 1"	Wall thickness minus 3/4"
Total Bolts in No. 204-2 and No. 204-3 sets.....	10	12	14	16		
Total Bolts in No. 1204 sets only.....	12	14	16	18		

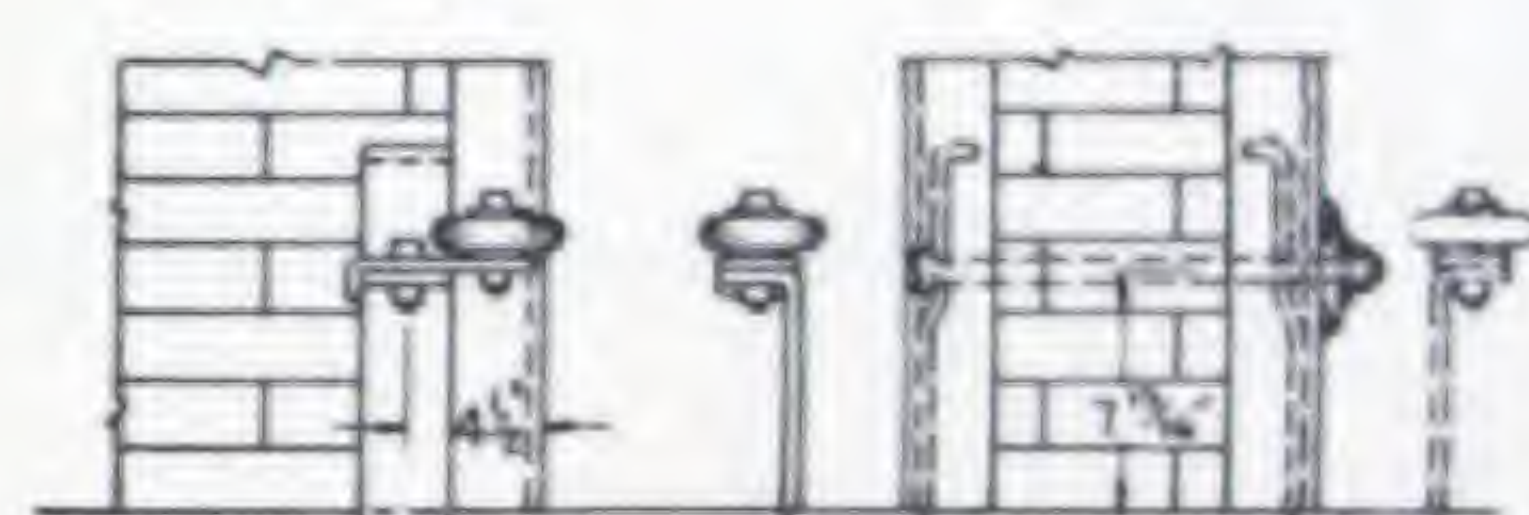
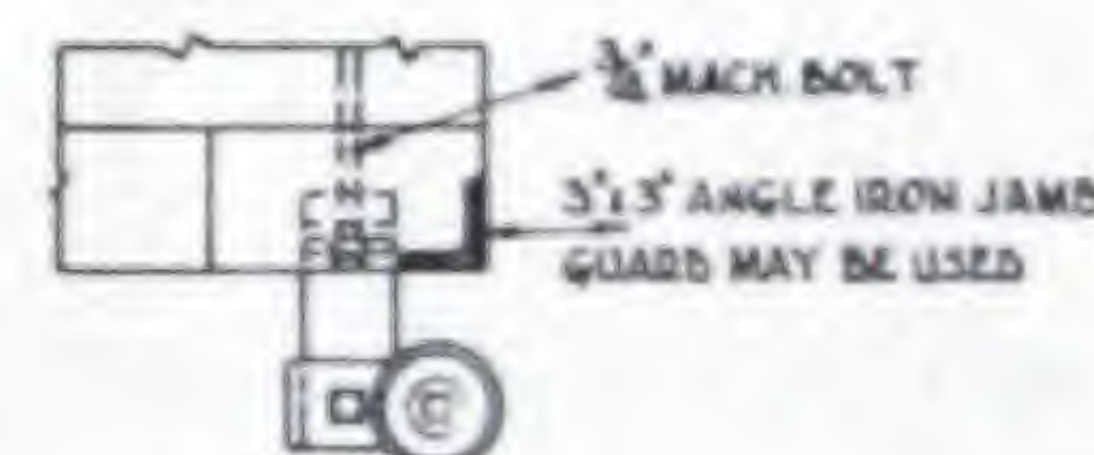
*Wall Bolt not required when No. 102-80 Guide Rollers are used.



RICHARDS-WILCOX No. 204 FIRE DOOR FIXTURES STANDARD STYLE



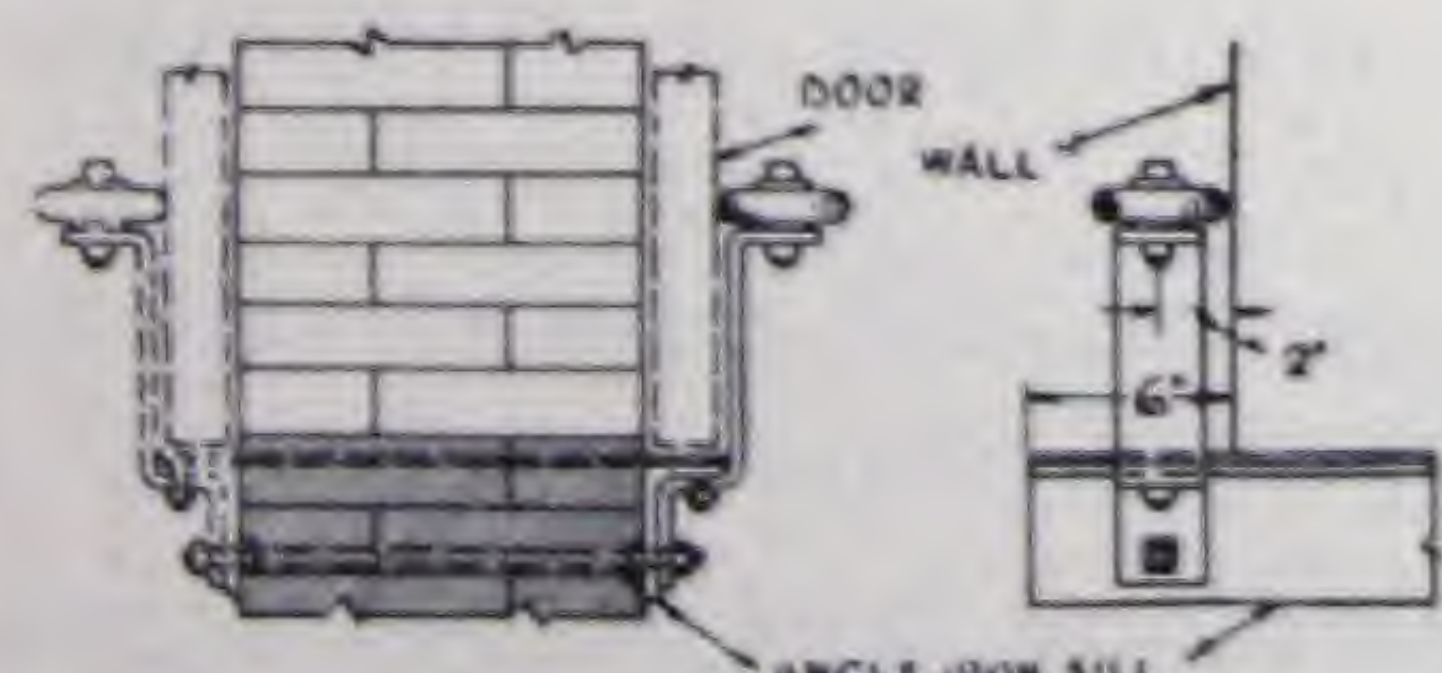
204-95 DOUBLE CENTER STOP DETAIL



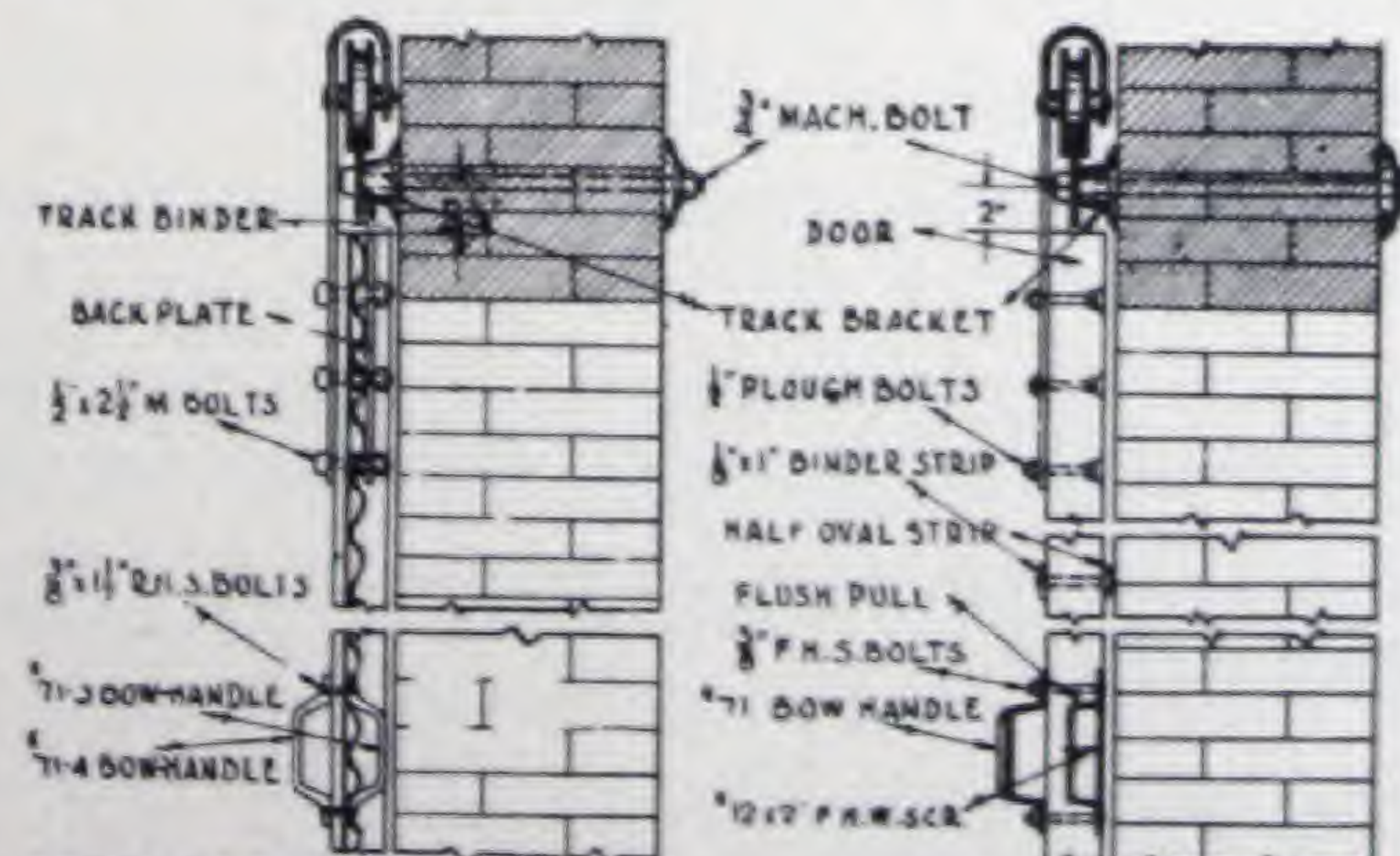
No. 56 BOSTON GUIDE ROLLER DETAIL
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING



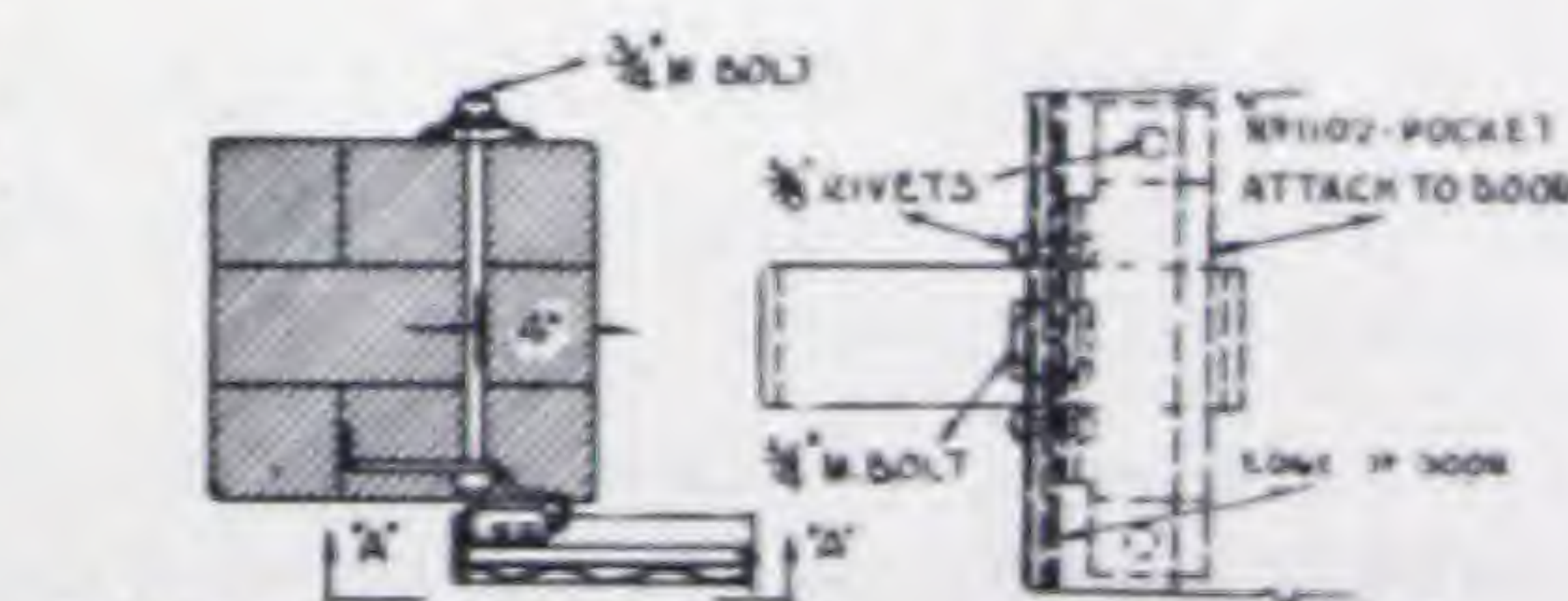
No. 156 GUIDE ROLLER DETAILS
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING



No. 102 80 GUIDE ROLLER DETAIL
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING



SECT. THRU DOOR & WALL
SHEET METAL DOOR
DETAIL 'B'



REAR BINDER DETAIL
SHEET METAL DOOR
VIEW AT 'AA' OF REAR BINDER

SECT. THRU DOOR & WALL
TIN-CLAD DOOR
DETAIL 'C'

Fourteen inches of headroom is required for non-adjustable hangers at center of opening, plus 3/4" for each foot the track extends beyond center of opening. Add three inches to above clearances for adjustable hangers.



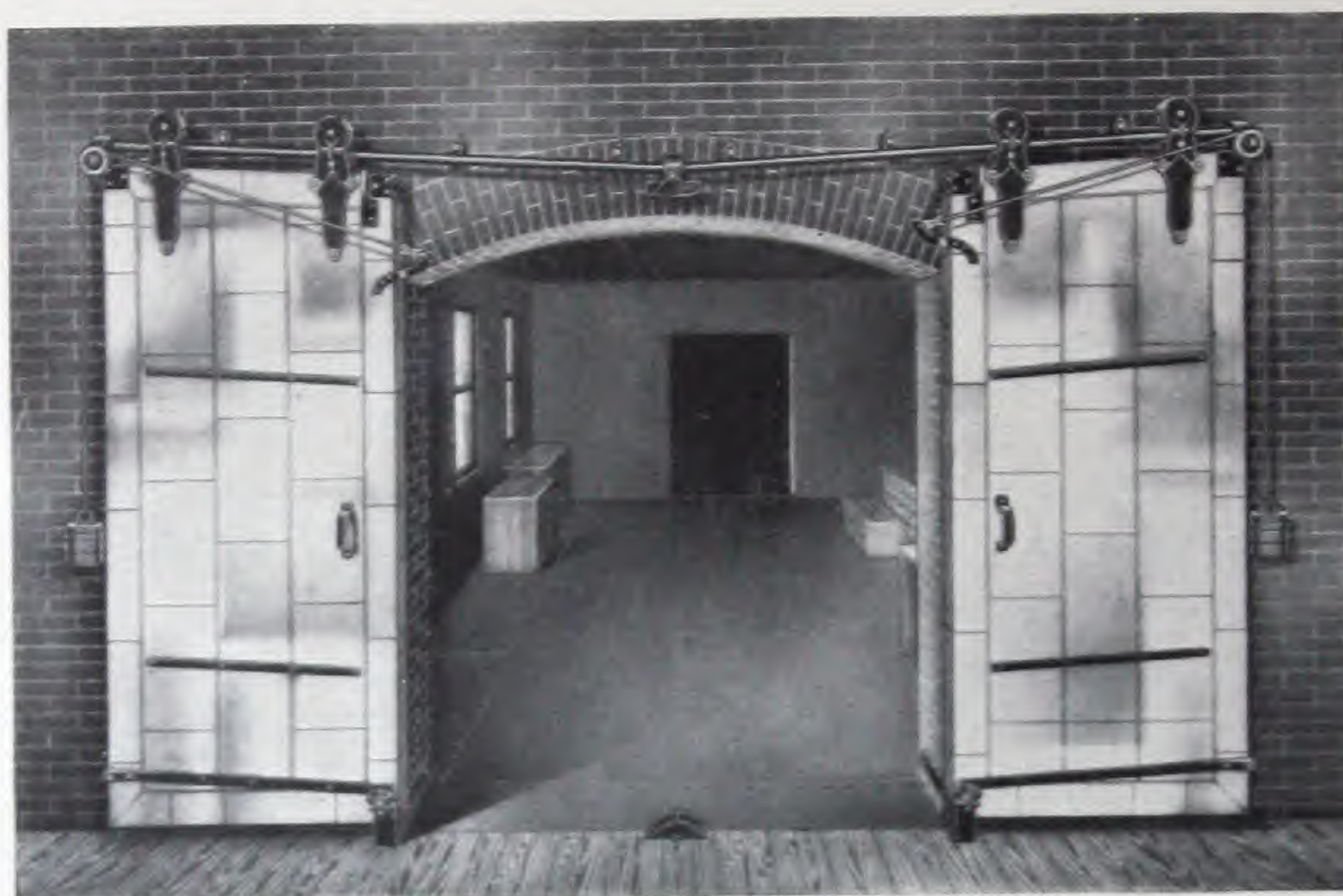
R-W Single Link Round Track Fire Door Fixtures

For Sliding Doors in Pairs, Incline Track.

R-W No. 604-2 For Two-ply (1- $\frac{3}{4}$ inch) Tin Clad Doors.

R-W No. 604-3 For Three-ply (2- $\frac{5}{8}$ inch) Tin Clad Doors.

R-W No. 1604 For "FyeR-Wall" Sheet Metal Doors.



No. 604 Fire Door Fixtures applied to tin clad fire doors.

This fixture is the same as No. 646 illustrated on pages 26-27 except that it is applied to pairs of doors.

This type has one fusible link on each door and both are exposed in the opening.

DIRECTIONS FOR ORDERING

STATE: First—Number of openings and number of doors; whether doors are on one side or both sides of wall. If latter, mention if fixtures can be bolted together and state thickness of wall. Do not say doors when you mean openings, as doors must lap four inches on each side and at top.

Second—Width and height of opening, (mention width first).

Third—Thickness of doors, if two-ply tin clad (1 $\frac{3}{4}$ inches), three-ply tin clad (2 $\frac{5}{8}$ inches) or "FyeR-Wall" sheet metal doors.

Fourth—Thickness of wall, when wall bolts are required, or when doors are used on both sides of wall, in which case special U Wall plates are required for guide rollers, when walls are less than 12" thick.

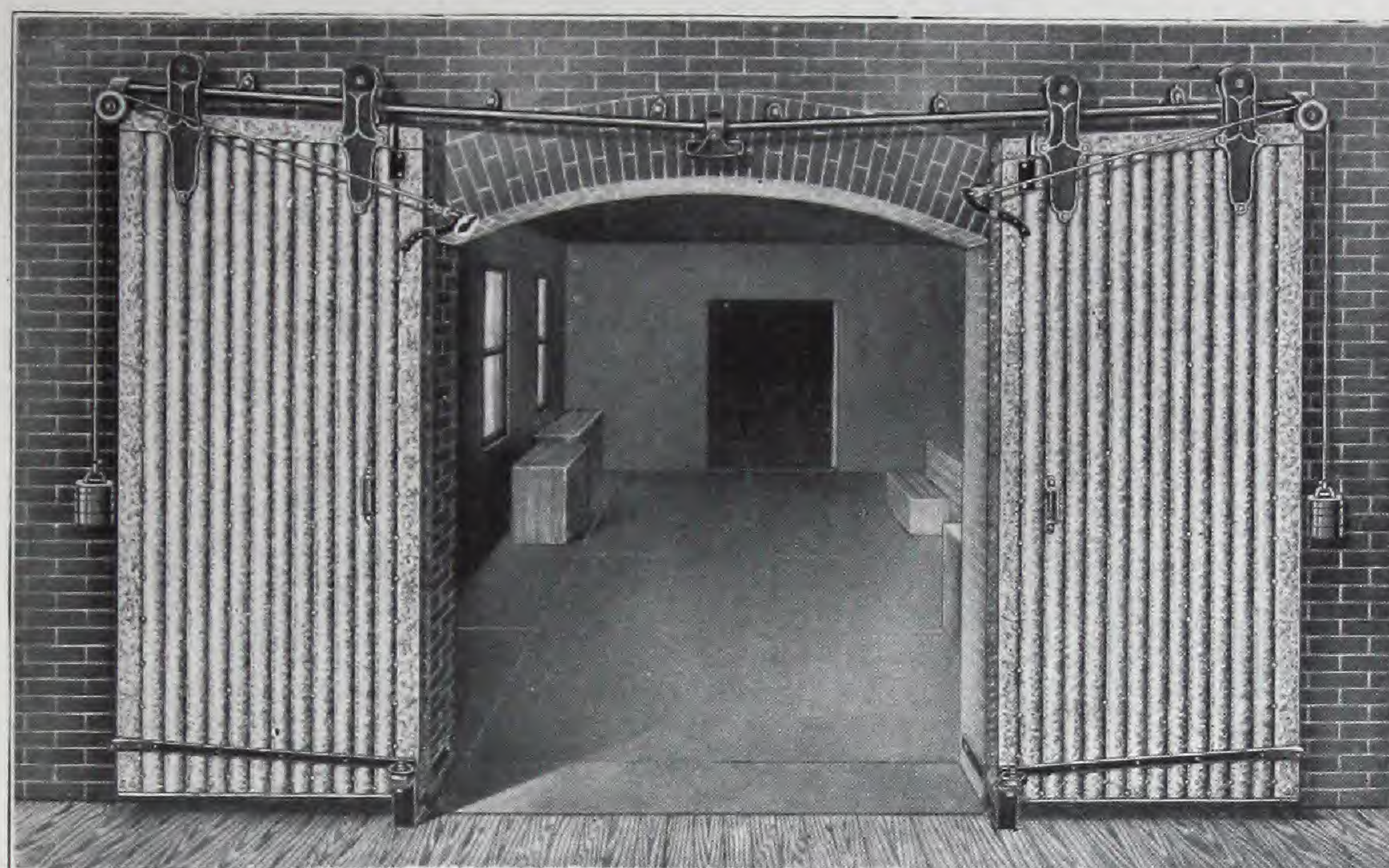
Fifth—Distance from edge of opening to walls at right angles, if any. State distances from highest points of openings to nearest obstructions overhead.

NOTE: Minimum clearances are given on page 37

Detail of parts shown on pages 20-21. See pages 82-85 for R-W Standard Approved and Labeled Tin-Clad, and R-W "FyeR-Wall" sheet metal doors. Hardware suitable for Saino and Merchant & Evans doors furnished when required.



R-W Single Link Round Track Fire Door Fixtures



No. 1604 Fire Door Fixtures Applied to "FyeR-Wall" Sheet Metal Doors.

List Price for Nos. 604-2, 604-3 and 1604 Fire Door Fixtures

The following price list includes non-adjustable hangers, track and fixtures complete for doors when used on one side of wall only. If doors are to be used on both sides of wall, double sets will be required and the price will be doubled. Fixtures packed complete with all bolts and screws for attaching parts to the door, heavy cast washers for wall bolts and necessary counter-balance weights. Weights are furnished regularly for openings 8' high. If opening is higher, additional weights are required.

Wall bolts are not included, but will be furnished at moderate price if thickness of wall is given.

Width of Opening with 2 pr. Hangers	List Price	Weight per Set, Lbs.	Width of Opening with 2 pr. Hangers	List Price	Weight per Set, Lbs.
3 feet	\$31.40	195	7 feet	\$37.40	242
3½ feet	32.10	198	7½ feet	38.10	255
4 feet	32.80	206	8 feet	38.80	257
4½ feet	33.50	209	8½ feet	39.50	266
5 feet	34.20	216	9 feet	40.20	268
5½ feet	34.90	220	9½ feet	40.90	280
6 feet	35.60	224	10 feet	41.60	282
6½ feet	36.70	240			

No. 604-2, No. 604-3 or No. 1604 Automatics only, weight, 31 lbs. Per set.....\$ 7.00

No. 604-2, No. 604-3 or No. 1604 Fixtures only, less Hangers, Track and Brackets; Binder, Chaft and Guide Roll Strips, weight 98 lbs. Per set..... 17.50

*No. 542-C Track only, with brackets for two-ply tin clad doors, weight 2¼ lbs. Per foot..... .34

*No. 542-C Track only, with brackets for three-ply tin clad doors, or "FyeR-Wall" Sheet Metal Doors, weight 2¼ lbs. Per foot34

No. 542-C Hangers only, with Back Plates, used with 604-2 Hardware, (page 52), weight 25½ lbs. Per pair 4.20

No. 542-C Hangers only, used with 604-3 Hardware, (page 52), weight 22 lbs. Per pair..... 4.20

No. 742 Hangers with Back Plates, used with No. 1604 Hardware, (page 52), weight 25½ lbs. Per pair 4.20

No. 642-5 Adjustable Hangers only, (page 52), weight 35 lbs. Per pair..... 8.50

NOTE: Double Link Fixtures can be furnished at per set additional 4.50

*Length of each track equals width of opening plus 7".

Discount.....

Packing List For R-W Nos. 604-2, 604-3 and 1604 Fire Door Fixtures

Standard Style

No. 604-2	No. 604-3	No. 1604	DESCRIPTION	List Price
2	..	..	No. 70-1 Flush Pull, each.....	\$.20
..	2	..	No. 70-2 Flush Pull, each.....	.25
2	..	..	No. 71-1 Bow Handles, each.....	.10
..	2	..	No. 71-2 Bow Handles, each.....	.15
..	..	2	No. 71-3 Bow Handles, each.....	.20
..	..	2	No. 71-4 Bow Handles, each.....	.25
*	*	*	No. 102-SC Sash Cord. (As required), per foot.....	.05
*	*	*	No. 102-61 Cast Washers. (See table below), each.....	.15
12	12	..	No. 102-72 Bumper Shoes, each.....	.10
2	..	..	No. 102-80-2 Guide Rollers. (For Angle Iron Sills Only), each.....	2.00
..	2	2	No. 102-80-3 Guide Rollers. (For Angle Iron Sills Only), each.....	2.00
4	4	..	No. 102-82 Binder Strips. Length equals half width of opening less 4", each.....	.40
2	2	2	No. 102-88 Guide Roll Strips. Length equals half width of opening less 1" (Plus 2" for No. 1604), each.....	.80
4	4	..	No. 102-89 Chafe Strips. Length equals half width of opening less 4", each.....	.40
2	2	2	No. 102-91 Weight Holders, each.....	.15
2	2	2	No. 102-97 Link Brackets with No. 96 Fusible Links attached, complete.....	.55
2	2	2	No. 102-98 Wedges, each.....	.10
*	*	*	No. 102-99 No. 1 Light Weights. (According to size of opening), each.....	.25
*	*	*	No. 102-99 No. 2 Heavy Weights. (According to size of opening), each.....	.75
2	..	..	*No. 156-2 Guide Rollers. (Omit for angle iron sills), each.....	2.00
..	2	2	†No. 156-3 Guide Rollers. (Omit for angle iron sills), each.....	2.00
1	..	..	No. 171-2 Center Floor Stop, each.....	.65
..	1	..	No. 171-3 Center Floor Stop, each.....	.75
2	2	2	No. 204-94 Center Bumpers, one right and one left hand, each.....	.30
4	..	..	No. 542-C Back Plates, each.....	.70
2 Pr.	2 Pr.	..	No. 542-C Hangers, per pair.....	4.20
2 Runs	2 Runs	2 Runs	No. 542-C Track. Length equals width of opening plus 6", per foot..	.34
*	..	..	No. 542-CB-2 Center Brackets. (See table below), each.....	.16
*	..	..	No. 542-C-J-2 Joint Brackets. (See table below), each.....	.30
..	*	*	No. 542-CB-3 Center Brackets. (See table below), each.....	.16
..	*	*	No. 542-CJ-3 Joint Brackets. (See table below), each.....	.30
1	..	..	No. 604-95-2 Combination Center Bracket and Binder, each.....	1.10
..	1	1	No. 604-95-3 Combination Center Bracket and Binder, each.....	1.20
2	..	..	No. 645-86-2 Combination End Bracket and Bumper. One right and one left hand, each.....	1.70
..	2	2	No. 645-86-3 Combination End Bracket and Bumper. One right and one left hand, each.....	1.70
..	..	2 Pr.	No. 742 Hangers with Back Plates, per pair.....	4.20
..	..	2	No. 1102-93 Rear Binder Pockets, each.....	1.00
..	..	2	No. 1102-94 Rear Binder Hooks, each.....	.80
1	1	1	Package Screws and Bolts.	

*No. 56-2 Boston Guide Roller may be substituted for this item if desired.

†No. 56-3 Boston Guide Roller may be substituted for this item if desired.

Discount.....

Table of No. 542-C-2 and No. 542-C-3 Brackets and No. 102-61 Washers For Above Fixtures.

Width of Opening	Number of Brackets (Center and Joint)	*Number of Washers
4' 0" to 6' 2"	6	11
6' 3" to 6' 8"	8	13
6' 9" to 9' 6"	10	15
9' 7" to 12' 8"	12	17
12' 9" to 13' 0"	14	19
Fixtures Only Require.....		5

*No. 1604 Fixtures require two more washers than shown above.

Wall Bolt List for No. 604-2, 604-3 and 1604 Fire Door Fixtures.

Wall bolts are not furnished with sets of fixtures regularly, but will be furnished at prevailing market prices when thickness of wall is given, and customer requests them. The table below gives the number and size of bolts required for various sized openings. Note that the number of bolts is the same for hardware installed on one or both sides of wall.

NUMBER OF 3/4" BOLTS REQUIRED FOR VARYING WIDTHS OF DOORWAY OPENINGS

Fixtures Bolts are Used to Fasten	LENGTH OF BOLTS REQUIRED FOR SETS INSTALLED				
	Opening 4' 0" to 6' 2" Wide	Opening 6' 3" to 6' 8" Wide	Opening 6' 9" to 9' 6" Wide	Opening 9' 7" to 12' 8" Wide	Opening 12' 9" to 13' 0" Wide
Combination Center Bracket and Binder.	1	1	1	1	1
*Guide Rollers.....	2	2	2	2	2
Center and Joint Track Brackets.....	6	8	10	12	14
Combination End Brackets and Bumpers.	2	2	2	2	2
Rear Binder Hooks, (in No. 1604 sets only).....	2	2	2	2	2
Total Bolts in No. 604-2 and No. 604-3 sets.....	11	13	15	17	19
Total Bolts in No. 1604 sets only.....	13	15	17	19	21

On One Side of Wall

On Both Sides of Wall

Wall thickness plus 2"

Wall thickness plus 2"

Wall thickness plus 1"

Wall thickness minus 3/4"

Wall thickness plus 2"

Wall thickness plus 2"

Wall thickness plus (A)

Wall thickness plus (B)

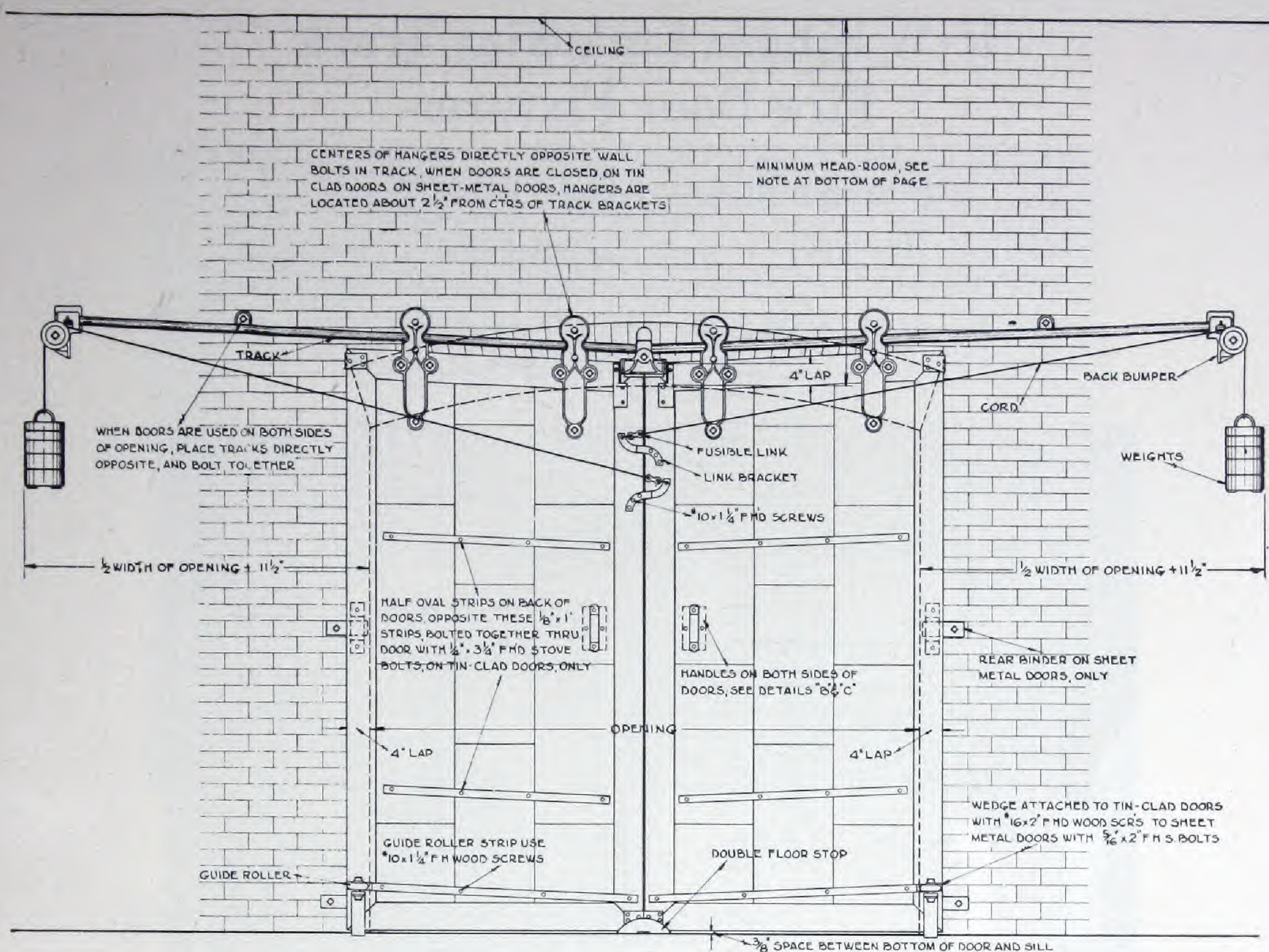
Wall thickness plus 1"

Wall thickness minus 3/4"

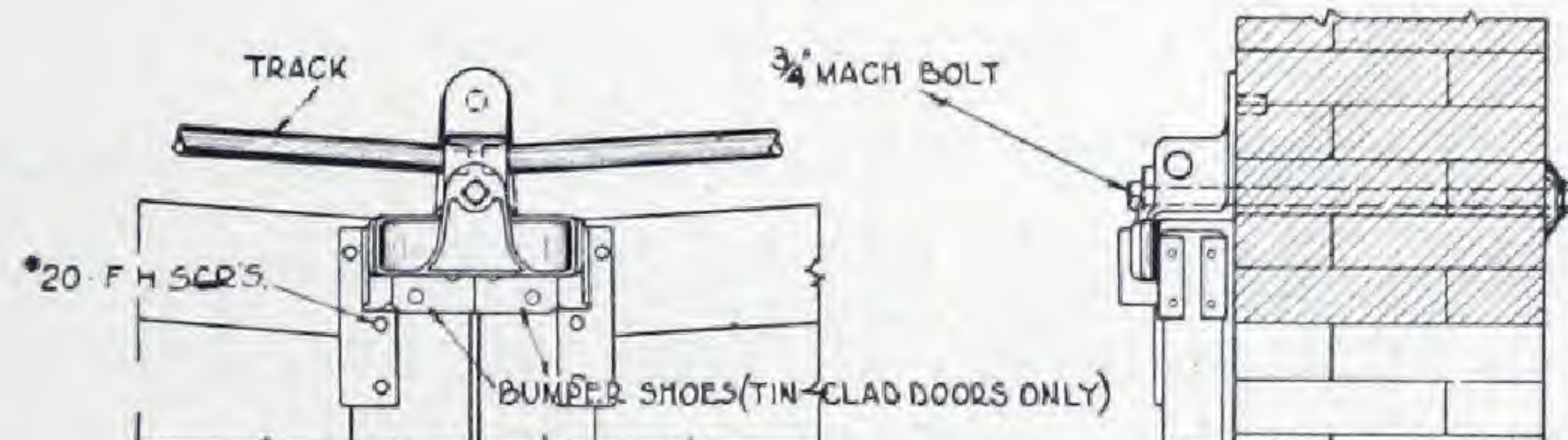
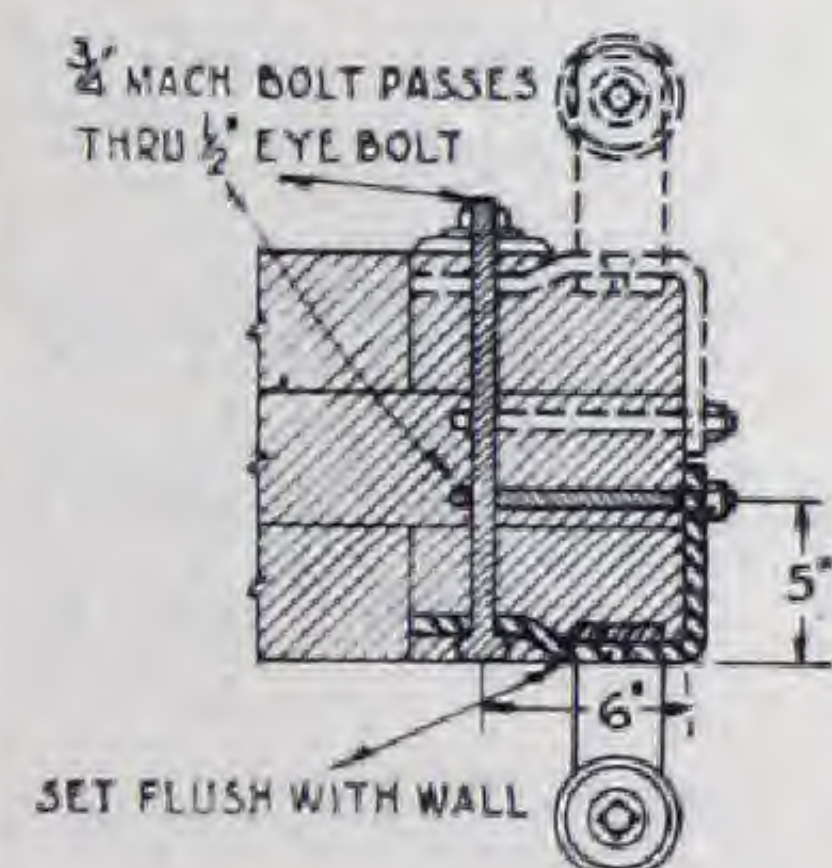
(A) 6 1/2" for 2-ply Tin Clad Doors, 2 1/4" for 3-ply

(B) 11" for 2-ply Tin Clad Doors, 2 1/4" for 3-ply

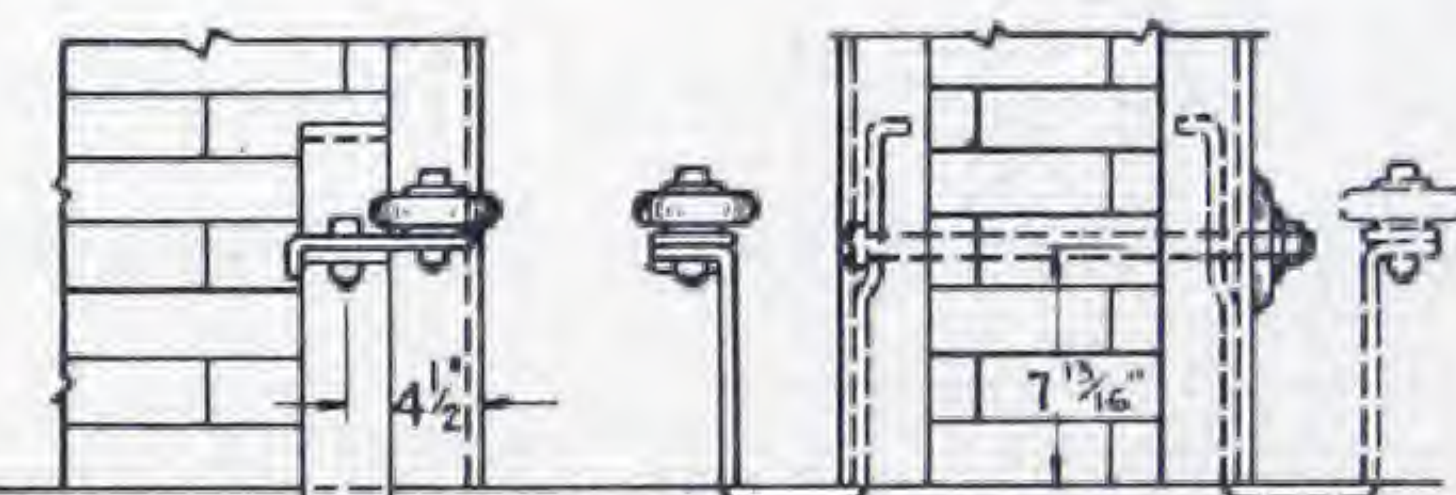
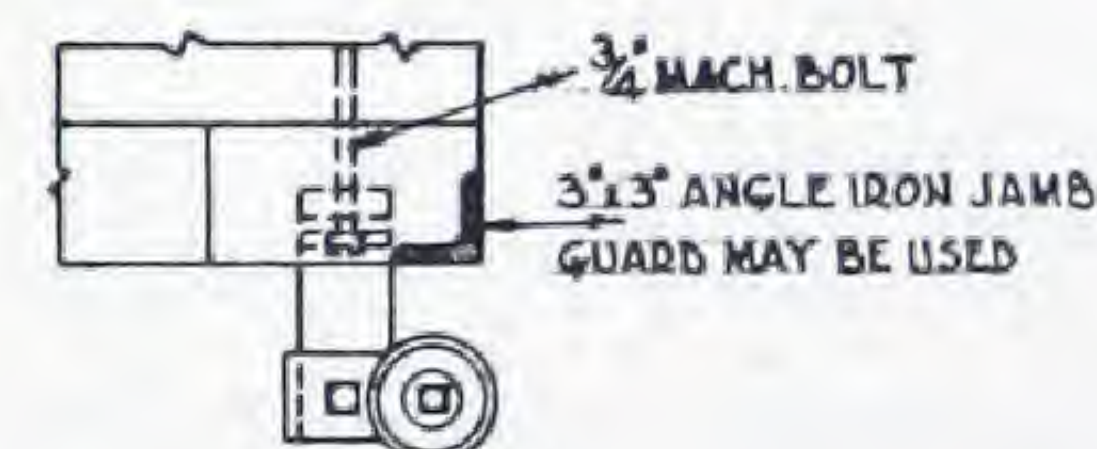
*Wall bolts not required when No. 102-80 Guide Rollers are used.



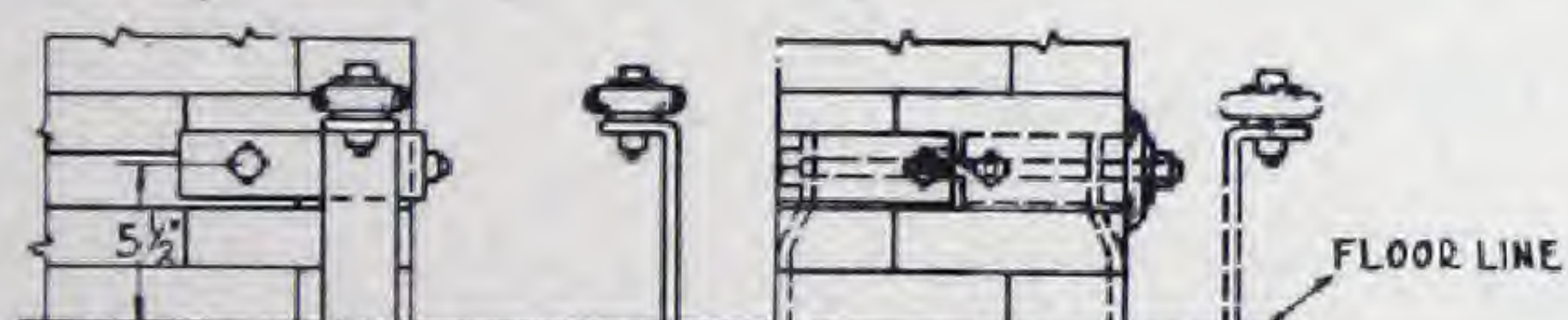
**RICHARDS-WILCOX No. 604 FIRE DOOR FIXTURES
STANDARD STYLE**



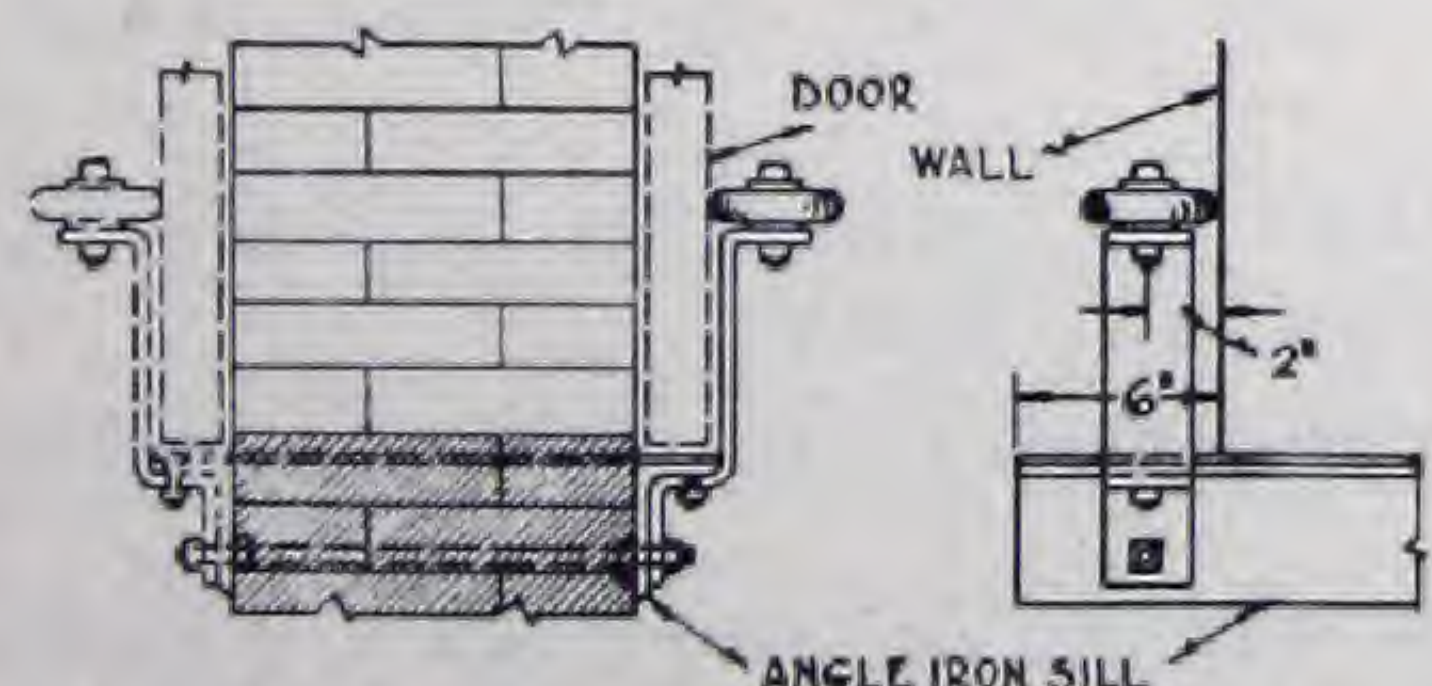
604-95 DOUBLE CENTER BINDER DETAIL



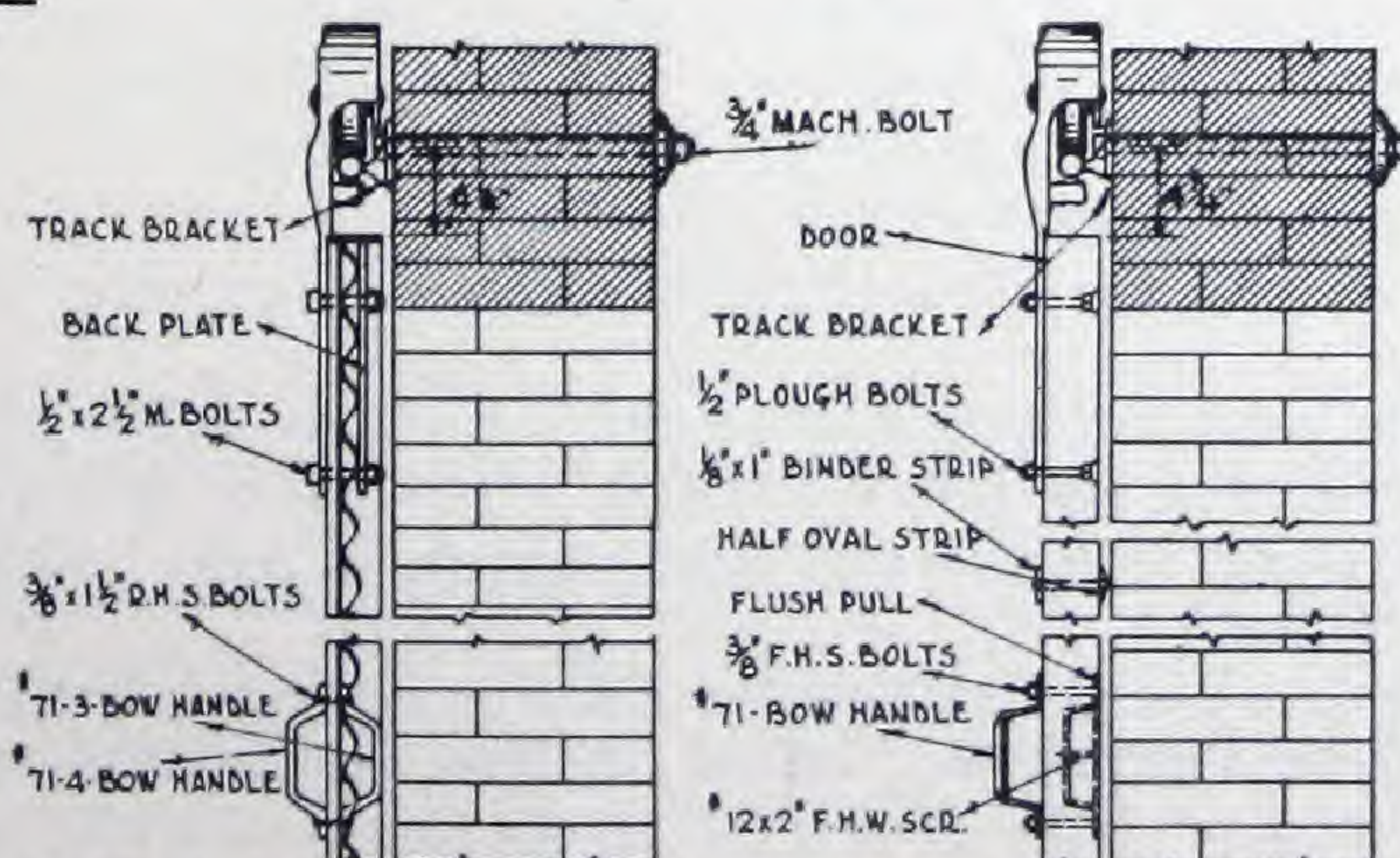
**No. 56 BOSTON GUIDE ROLLER DETAIL
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING**



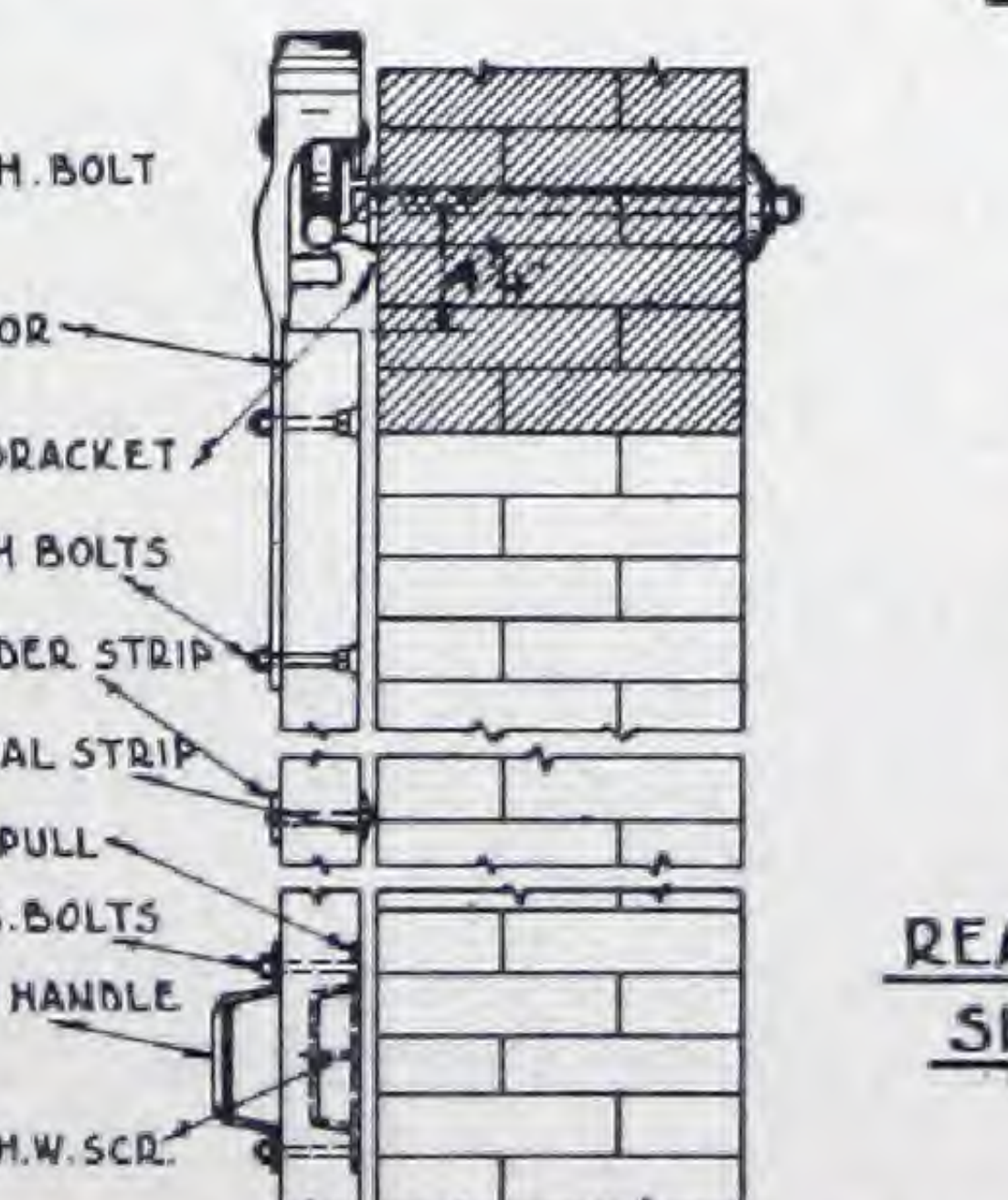
**No. 156 GUIDE ROLLER DETAILS
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING**



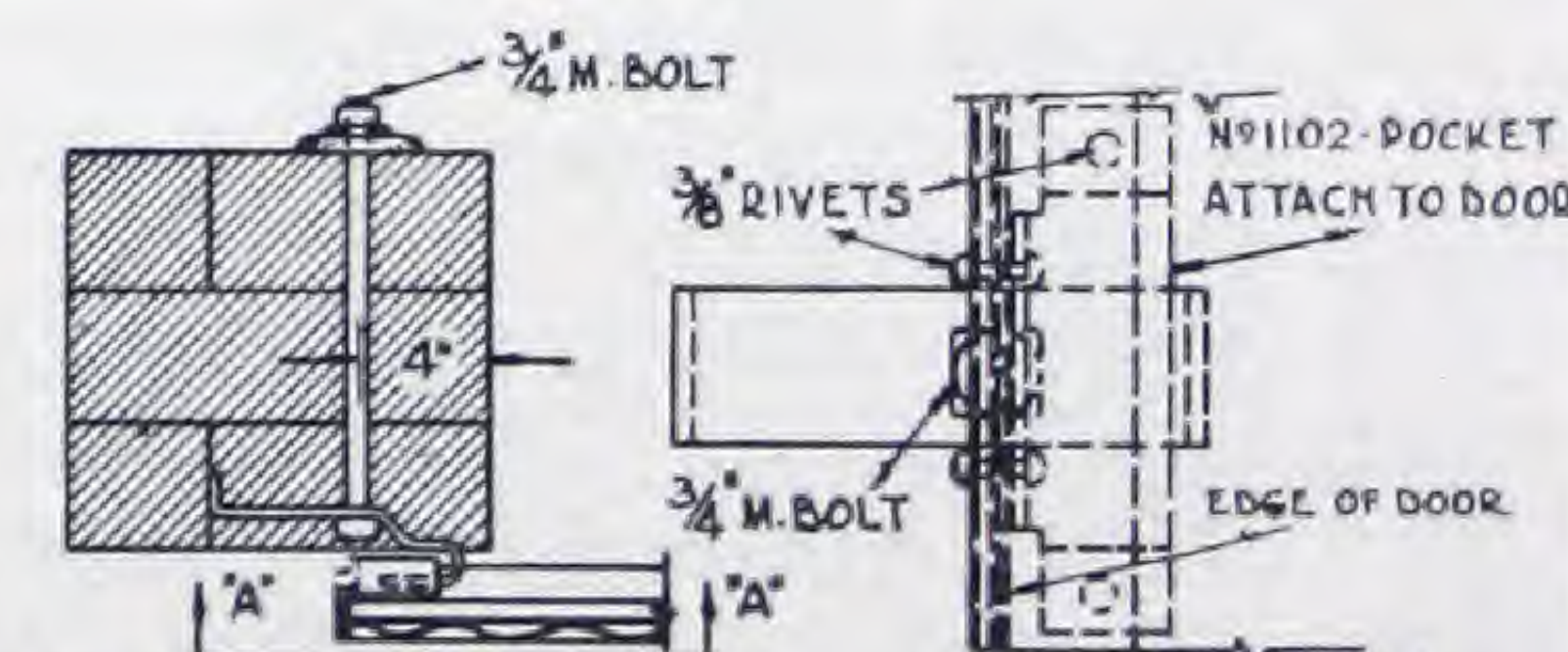
**No. 102-80 GUIDE ROLLER DETAIL
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING**



**SECT. THRU DOOR & WALL
SHEET METAL DOOR
DETAIL "B"**



**SECT. THRU DOOR & WALL
TIN-CLAD DOOR
DETAIL "C"**



**REAR BINDER DETAIL
SHEET METAL DOOR**

**VIEW AT "AA"
OF REAR BINDER**

Twelve inches of headroom is required for non-adjustable hangers at center of opening, plus 3/4" for each foot the track extends beyond center of opening. Add 2" to above clearances for adjustable hangers.



R-W Single Link Flat Track Fire Door Fixtures

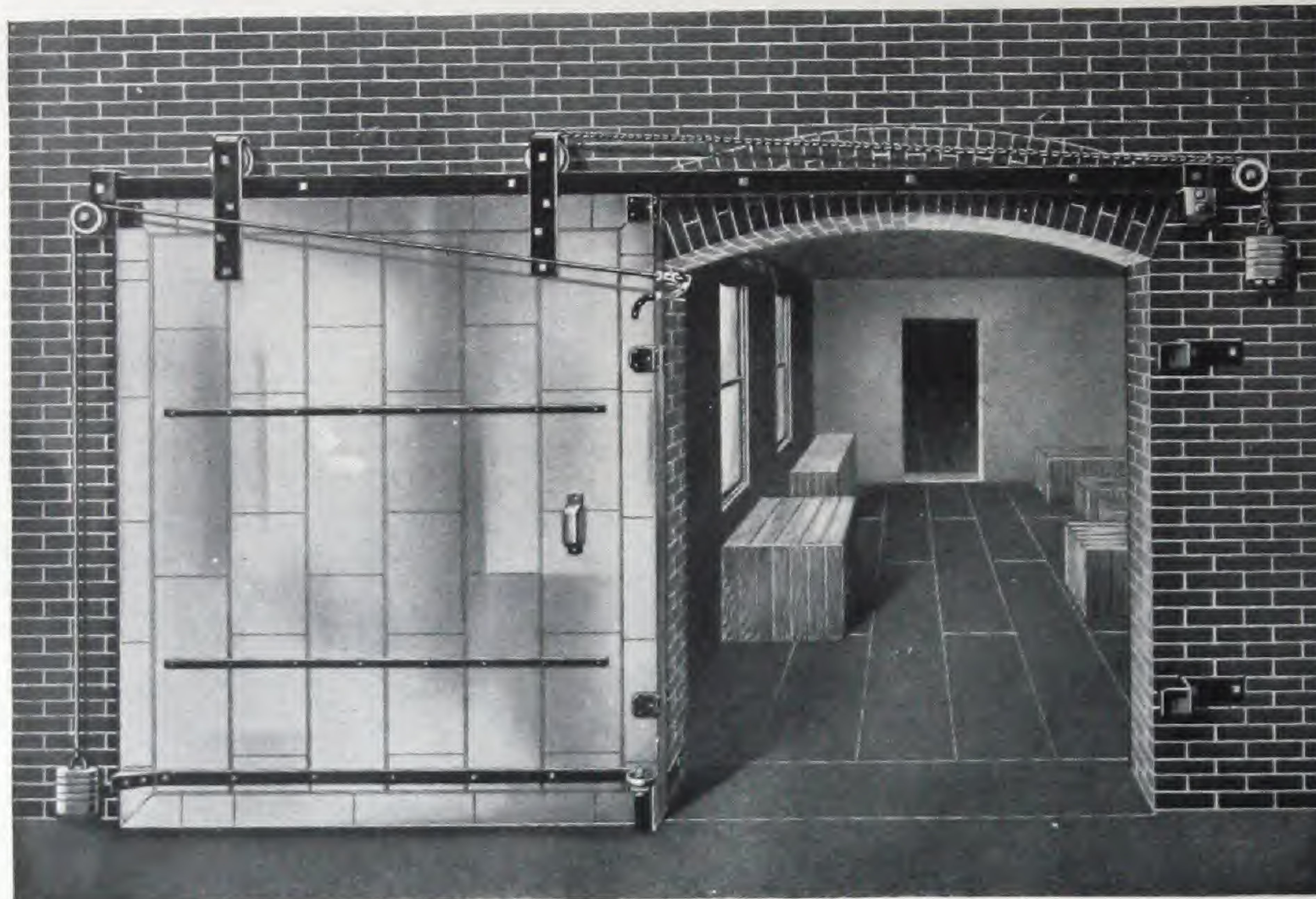
For Single Sliding Doors, Level Track

R-W No. 303-2 For Two-ply (1- $\frac{3}{4}$ inch) Tin Clad Doors.

R-W No. 303-3 For Three-ply (2- $\frac{5}{8}$ inch) Tin Clad Doors.

R-W No. 1303 For "FyeR-Wall" Sheet Metal Doors.

(Requires 14" Headroom).



No. 303 Fire Door Fixtures Applied to Tin Clad Fire Doors.

This style of fixture is used for openings where there is not enough headroom to place track on an incline of $\frac{3}{4}$ inch to the foot. Two sets of weights are used to balance the door. The back weights are held in position by a fusible link. In case of fire, this link fuses and allows back weights to drop, and the front weights then pull the door shut.

This fixture is the same style as No. 201, shown on page 16 except that it operates on level track. This type has but one fusible link which is exposed in the opening.

DIRECTIONS FOR ORDERING

STATE: First—Number of openings and number of doors; whether doors are on one side or both sides of wall. If latter, mention if fixtures can be bolted together and state thickness of wall. Do not say doors when you mean openings, as doors must lap four inches on each side and at top.

Second—Width and height of opening, (mention width first).

Third—Thickness of doors, if two-ply tin clad (1 $\frac{1}{2}$ inches), three-ply tin clad (2 $\frac{1}{8}$ inches) or "FyeR-Wall" sheet metal doors.

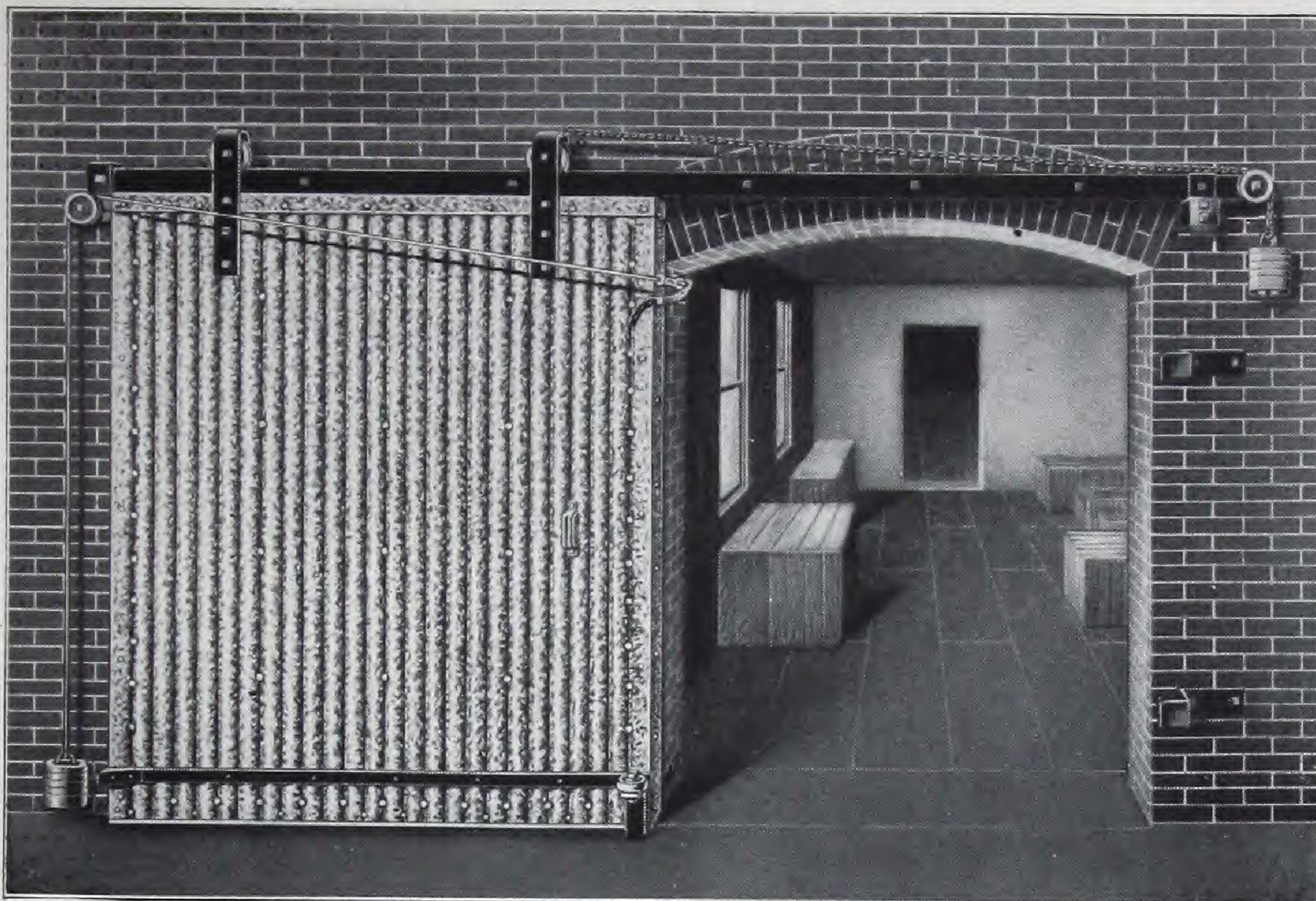
Fourth—Thickness of wall, when wall bolts are required, or when doors are used on both sides of wall, in which case special U Wall plates are required for guide rollers, when walls are less than 12" thick.

Fifth—Distance from edge of opening to walls at right angles, if any. State distances from highest points of openings to nearest obstructions overhead.

NOTE: Minimum clearances and special automatic closing arrangements are shown on page 41. Unless otherwise specified Standard Style will be furnished. Three inches additional headroom required for adjustable hangers.

Detail of parts shown on pages 20-21. See pages 82-85 for R-W Standard Approved and Labeled Tin-Clad, and R-W "FyeR-Wall" sheet metal doors. Hardware suitable for Saino and Merchant & Evans doors furnished when required.

R-W Single Link Flat Track Fire Door Fixtures



No. 1303 Fire Door Fixtures Applied to "FyeR-Wall" Sheet Metal Doors

List Price for Nos. 303-2, 303-3 and 1303 Fire Door Fixtures

The following list price includes non-adjustable hangers, track and fixtures complete for doors when used on one side of wall only. If doors are to be used on both sides of wall, double sets will be required and the price will be doubled. Fixtures packed complete with all bolts and screws for attaching parts to door, heavy cast washers for wall bolts and necessary counter balance weights. Weights are furnished regularly for openings 8' high. If opening is higher, additional weights are required.

Wall bolts are not included, but will be furnished at moderate price if thickness of wall is given.

Width of Opening with 1 pr. Hangers	List Price	Weight Per Set, Lbs.	*Width of Opening with 1½ pr. Hangers	List Price	Weight Per Set, Lbs.
3 feet	\$19.95	182	6½ feet	\$26.10	254
3½ feet	20.55	188	7 feet	26.65	259
4 feet	21.10	202	7½ feet	27.20	265
4½ feet	21.60	208	8 feet	27.80	273
5 feet	22.15	213	8½ feet	28.40	279
5½ feet	22.75	225	9 feet	29.05	293
6 feet	23.40	233	9½ feet	29.70	299
			10 feet	30.30	304

No. 303-2, No. 303-3 or No. 1303 Automatics only, weight 59 lbs. Per set.....\$ 6.00

No. 303-2, No. 303-3 or No. 1303 Fixtures only, less Hangers, Track and Brackets; Binder, Chafe and Guide Roll Strips, weight 119 lbs. Per set..... 12.00

†No. 303-84 Track only, with brackets, weight 4½ lbs. Per foot40

No. 102-2x303 Hangers only, (page 52), weight 30 lbs. Per pair 4.10

No. 102-3x303 Hangers only, (page 52), weight 30 lbs. Per pair 4.10

No. 1102x1303 Hangers with Back Plates, (page 52), weight 35 lbs. Per pair..... 4.10

No. 202x303 Adjustable Hangers only, (page 52), weight 36 lbs. Per pair 7.00

*For openings, (not doors), over six feet wide, Underwriters require three hangers.

†Length of track equals twice width of opening plus 29".

Discount.....

**Packing List for R-W No. 303-2, No. 303-3 and No. 1303 Fire Door Fixtures
Standard Style.**

303-2	303-3	1303	DESCRIPTION	List Price
1	..	..	No. 70-1 Flush Pull, each.....	\$.20
..	1	..	No. 70-2 Flush Pull, each.....	.25
1	..	..	No. 71-1 Bow Handle, each.....	.10
..	1	..	No. 71-2 Bow Handle, each.....	.15
..	..	1	No. 71-3 Bow Handle, each.....	.20
..	..	1	No. 71-4 Bow Handle, each.....	.25
*	*	*	No. 102-SC Sash Cord. (As required), per foot.....	.05
*	*	*	No. 102-61 Cast Washers. (See table below), each.....	.15
8	8	..	No. 102-72 Bumper Shoes, each.....	.10
1	..	..	No. 102-80-2 Guide Roller. (For angle iron sills only), each.....	2.00
..	1	1	No. 102-80-3 Guide Roller. (For angle iron sills only), each.....	2.00
*	*	*	No. 102-85 Cone Brackets. (See table below), each.....	.20
2	2	..	No. 102-82 Binder Strips. Length equals width of opening less 4", each.....	.40
1	1	1	No. 102-87 Front Bumper, each.....	1.00
1	1	1	No. 102-88 Guide Roll Strip. Length equals width of opening plus 3". (Plus 6" for No. 1303), each.....	.80
2	2	..	No. 102-89 Chafe Strips. Length equals width of opening less 4", each.....	.40
2	2	2	No. 102-91 Weight Holders, each.....	.15
2	..	..	No. 102-95-2 Binders, each.....	.80
..	2	2	No. 102-95-3 Binders, each.....	.80
1	1	1	No. 102-97 Link Bracket with No. 96 Fusible Link Attached, complete.....	.55
1	1	1	No. 102-98 Wedge, each.....	.10
*	*	*	No. 102-99 No. 1 Light Weights. (According to size of opening), each.....	.25
*	*	*	No. 102-99 No. 2 Heavy Weights. (According to size of opening), each.....	.75
1	..	..	†No. 156-2 Guide Roller. (Omit for angle iron sills), each.....	2.00
..	1	1	*No. 156-3 Guide Roller. (Omit for angle iron sills), each.....	2.00
1	1	1	No. 201-86 Rope Pulley and Back Bumper, complete.....	1.70
*	*	*	No. 303-STC Sash Chain. Length equals width of opening plus 4', per foot.....	.10
1 Pr.	..	..	No. 303-2 Hangers. (Openings over 6' wide require 1-½ pair), per pair.....	4.10
..	1 Pr.	..	No. 303-3 Hangers. (Openings over 6' wide require 1-½ pair), per pair.....	4.10
1 Run	1 Run	1 Run	No. 303-84 Track. Length equals twice width of opening plus 29", per foot.....	.40
1	1	1	No. 304-SB Sheave, each.....	.70
..	..	2	No. 1102-90 Track Binders. (Openings over 6' require 3), each.....	.30
..	..	1	No. 1102-93 Rear Binder Pocket, each.....	1.00
..	..	1	No. 1102-94 Rear Binder Hook, each.....	.80
..	..	1 Pr.	No. 1303 Hangers with backplates. (Openings over 6' wide require 1½ pair), per pair.....	4.10
1	1	1	Package Screws and Bolts	

†No. 56-2 Boston Guide Roller may be substituted for this item if desired.
*No. 56-3 Boston Guide Roller may be substituted for this item if desired.

Discount.....

Table of No. 102-85 Brackets and No. 102-61 Washers For Above Fixtures.

Table of No. 102-55 Brackets and No. 102-55 Washers		
Width of Opening	Number of Brackets	*Number of Washers
2' 0" to 4' 8"	5	10
4' 9" to 5' 2"	6	11
5' 3" to 7' 8"	7	12
7' 9" to 8' 8"	9	14
8' 9" to 11' 8"	10	15
11' 9" to 13'	11	16
	Fixtures Only Require.....	5

*No 1303 Fixtures require one more washer than shown above.

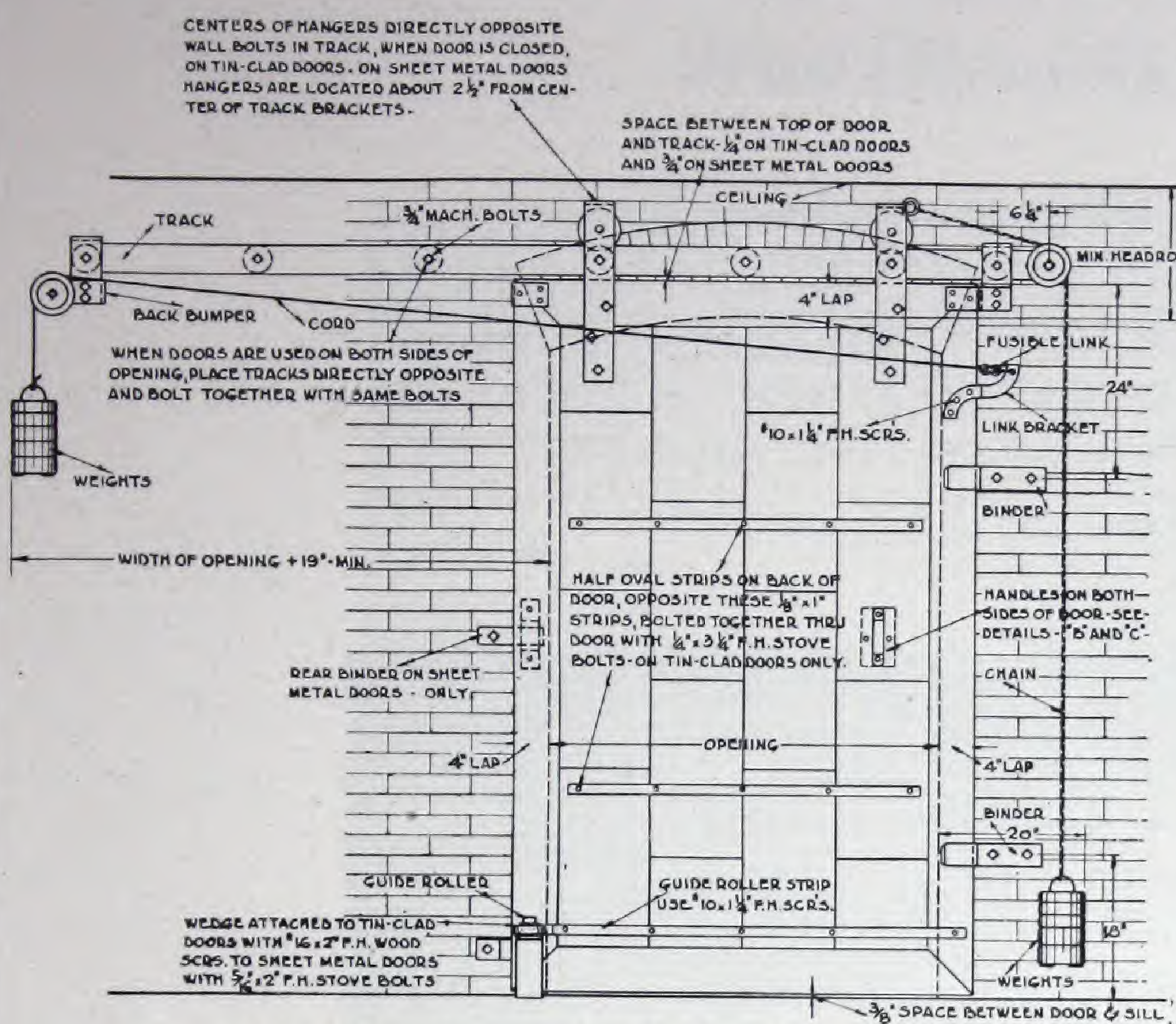
Wall Bolt List for Nos. 303-2, 303-3 and No. 1303 Fire Door Fixtures

Wall bolts are not furnished with sets of fixtures regularly, but will be furnished at prevailing market prices when thickness of wall is given and customer requests them. The table below gives the number and size of bolts required for various sized openings. Note that the number of bolts is the same for hardware installed on one or both sides of wall.

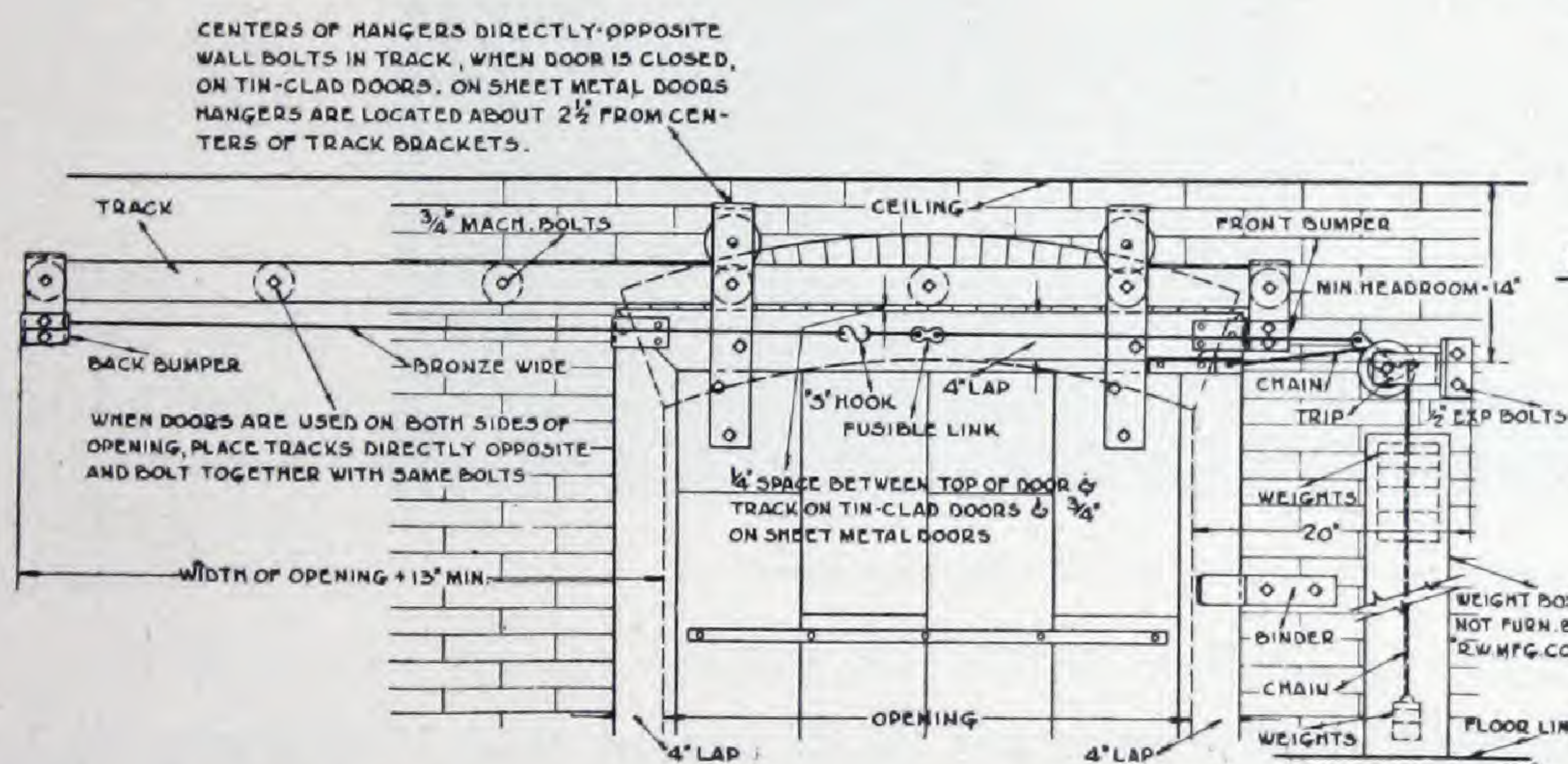
NUMBER OF ¾" BOLTS REQUIRED FOR VARYING WIDTHS OF DOORWAY OPENINGS

Fixture Bolts are Used to Fasten	Length of Bolts Required for Sets Installed					
	Opening 0" to 4'	Opening 4' to 5'	Opening 5' to 7'	Opening 7' to 8'	Opening 8' to 11'	Opening 11' to 13' 0"
Binders.....	4	4	4	4	4	4
*Guide Rollers.....	1	1	1	1	1	1
End Track Brackets.....	2	2	2	2	2	2
Center Track Brackets.....	3	4	5	7	8	9
Rear Binder Hook for No. 1303 sets only.....	1	1	1	1	1	1
Total Bolts in No. 303-2 and No. 303-3 sets.....	10	11	12	14	15	16
Total Bolts in No. 1303 sets.....	11	12	13	15	16	17

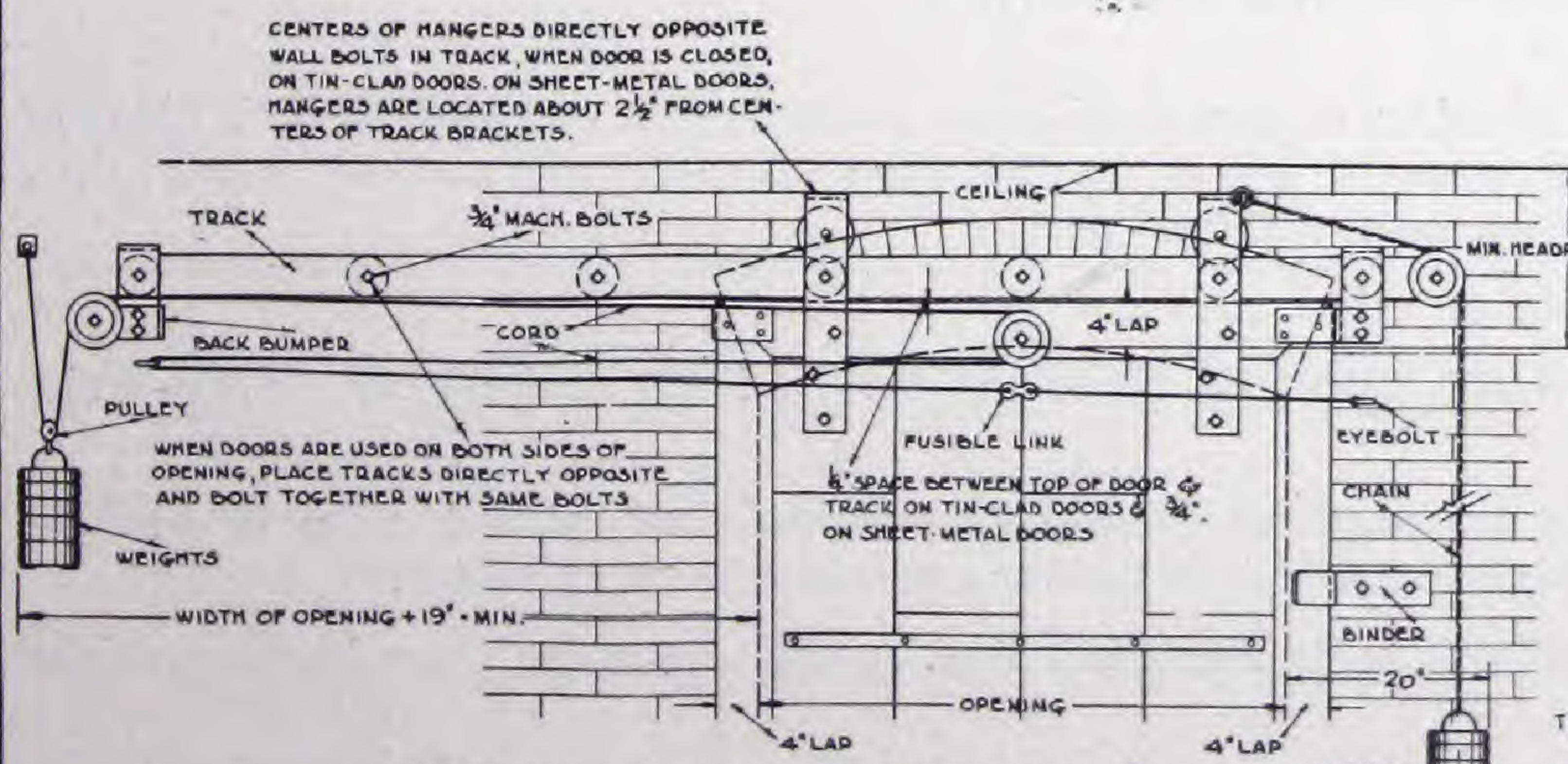
*Wall bolts not required when No. 102-80 Guide Rollers are used.



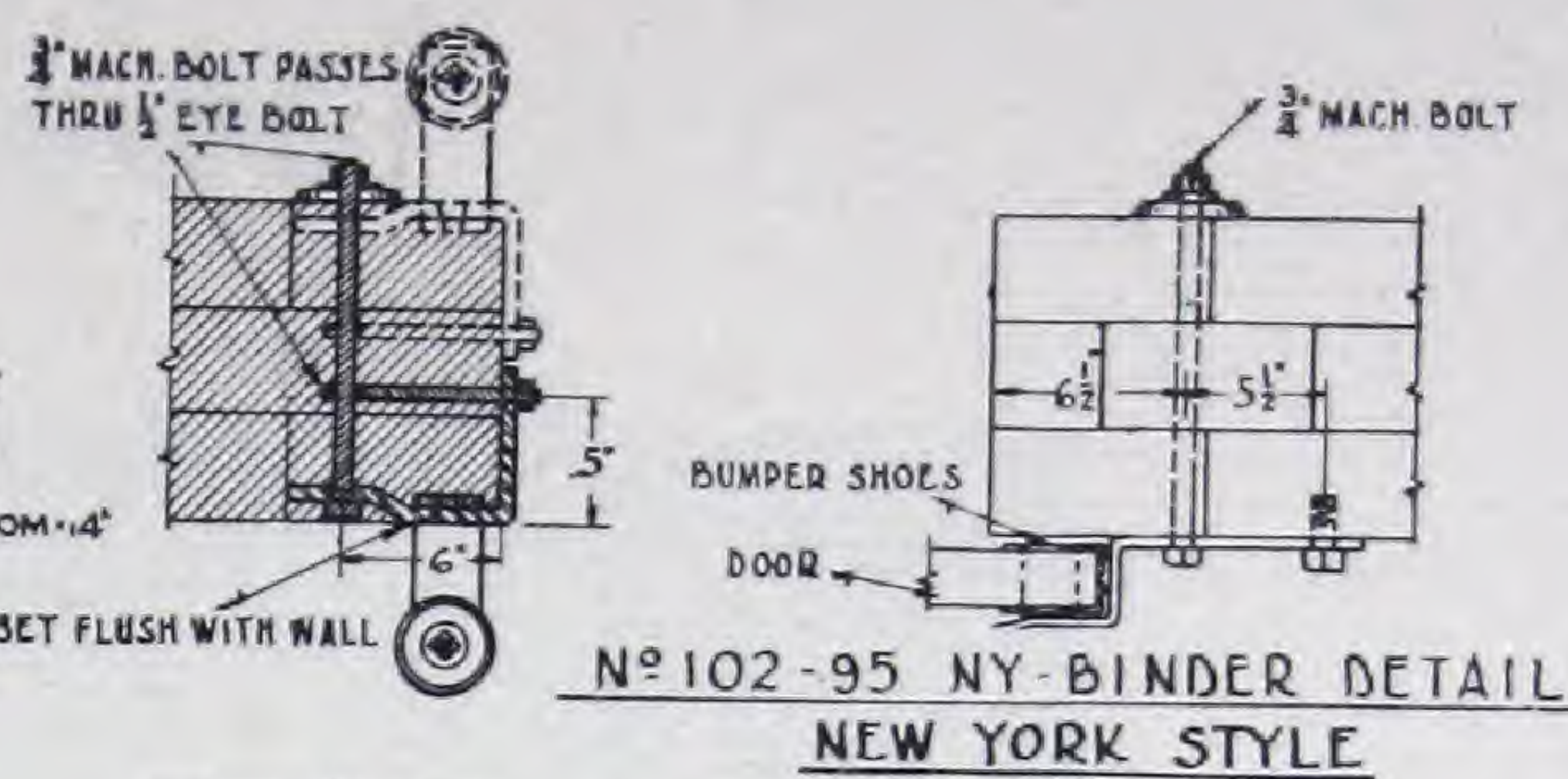
**RICHARDS-WILCOX No. 303 FIRE DOOR FIXTURES
STANDARD STYLE**



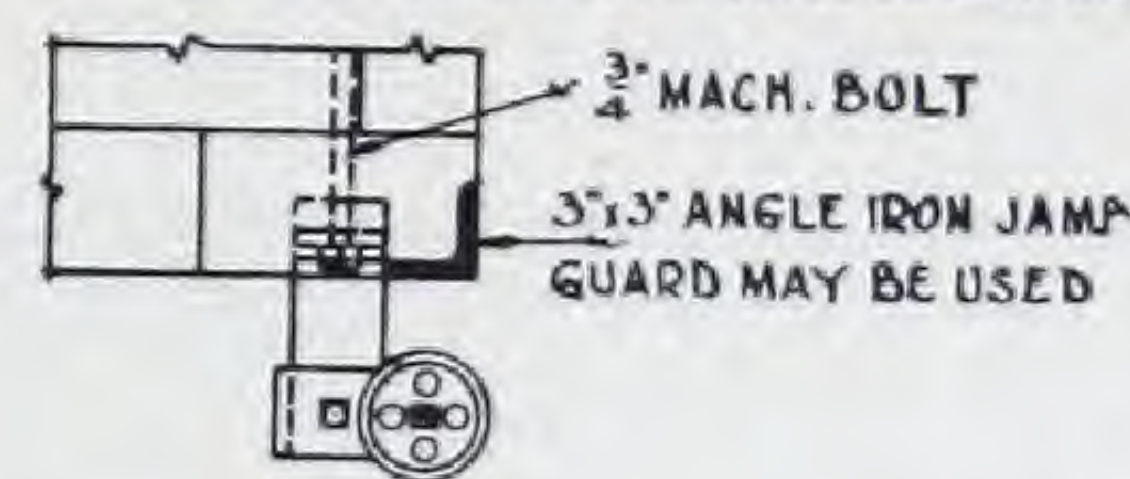
**RICHARDS-WILCOX No. 303 FIRE DOOR FIXTURES
CHICAGO STYLE**



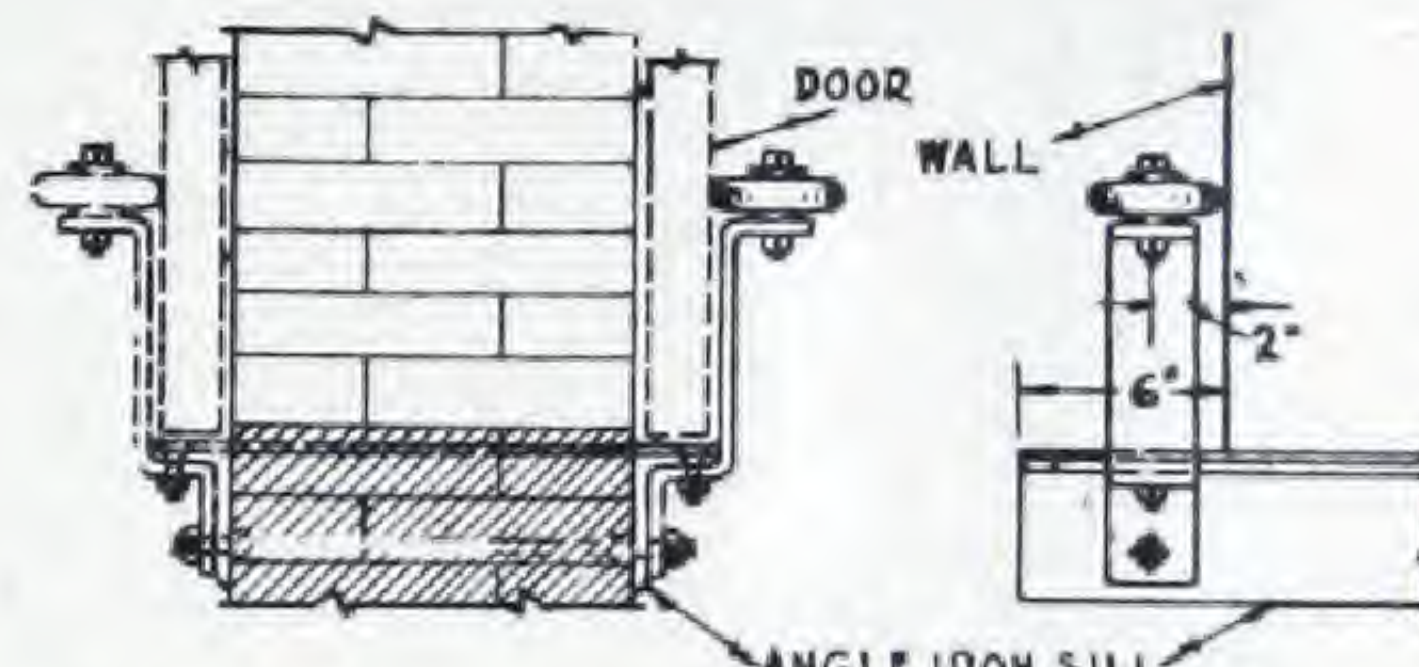
**RICHARDS-WILCOX No. 303 FIRE DOOR FIXTURES
CINCINNATI STYLE**



No. 156 GUIDE ROLLER DETAILS
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING

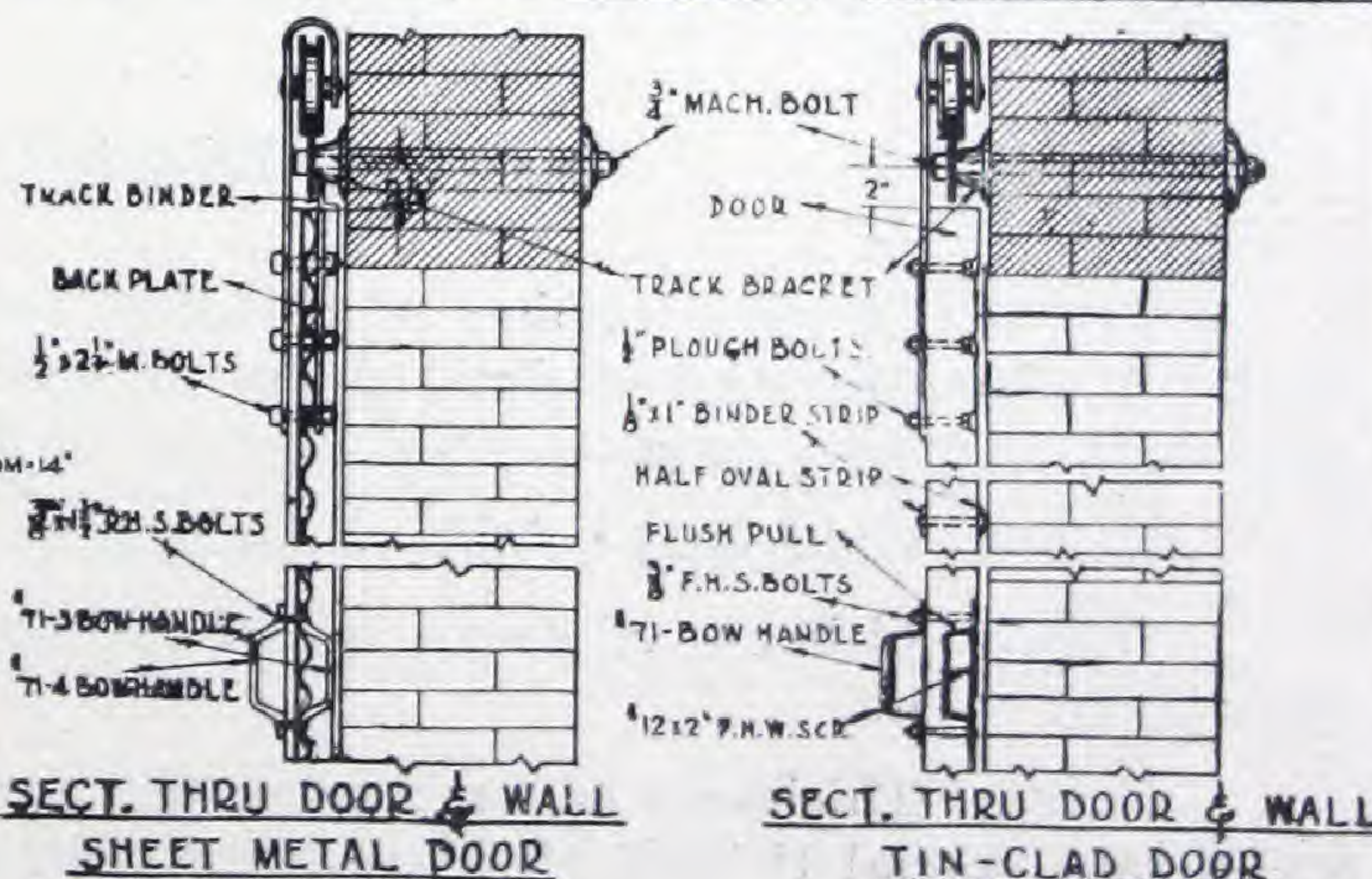


No. 56 BOSTON GUIDE ROLLER DETAIL
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING

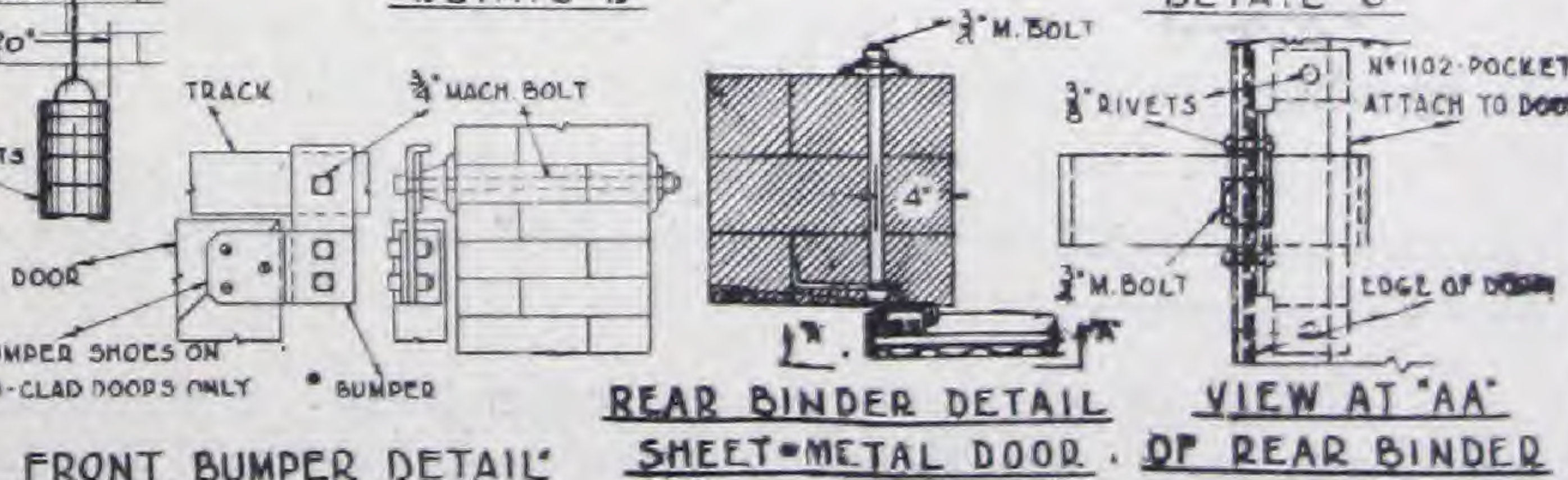


No. 102-80 GUIDE ROLLER DETAIL
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING

No. 102-95 BINDER DETAIL No. 102-94 RIGHT ANGLE BINDER



SECT. THRU DOOR & WALL SHEET METAL DOOR DETAIL B SECT. THRU DOOR & WALL TIN-CLAD DOOR DETAIL C



FRONT BUMPER DETAIL REAR BUMPER DETAIL SHEET-METAL DOOR VIEW AT 'AA' OF REAR BUMPER



R-W Single Link Round Track Fire Door Fixtures

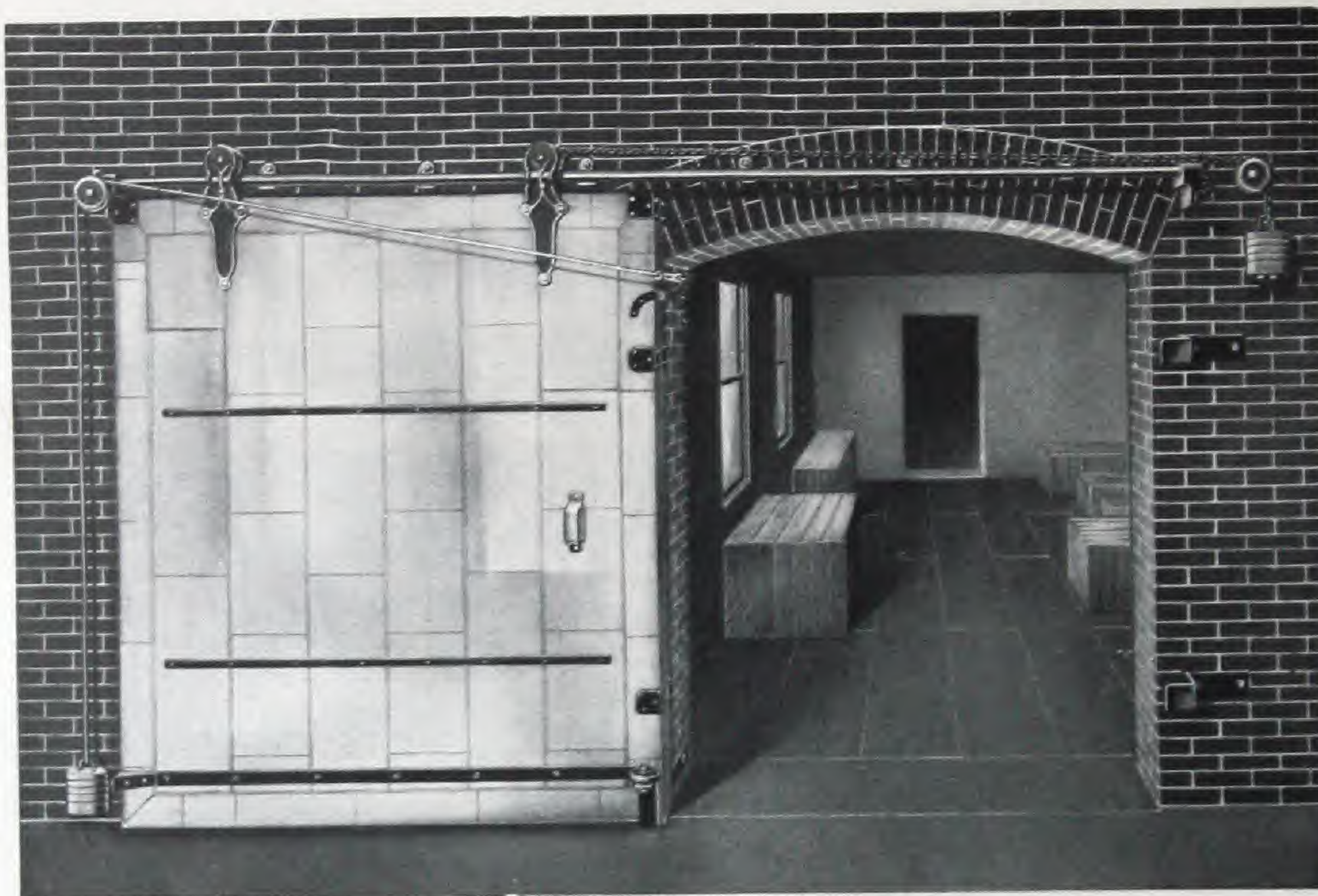
For Single Sliding Doors, Level Track

R-W No. 641-2 For Two-ply (1- $\frac{3}{4}$ inch) Tin Clad Doors.

R-W No. 641-3 For Three-Ply (2- $\frac{5}{8}$ inch) Tin Clad Doors.

R-W No. 1641 For "FyeR-Wall" Sheet Metal Doors.

(Requires 12" Headroom.)



No. 641 Fire Door Fixtures Applied to Tin Clad Fire Doors

This fixture is the same style as No. 646 shown on pages 26-27 except that it operates on level track. This type has but one fusible link which is exposed in the opening.

DIRECTIONS FOR ORDERING

STATE: First—Number of openings and number of doors; whether doors are on one side or both sides of wall. If latter, mention if fixtures can be bolted together and state thickness of wall. Do not say doors when you mean openings, as doors must lap four inches on each side and at top.

Second—Width and height of opening, (mention width first).

Third—Thickness of doors, if two-ply tin clad (1 $\frac{1}{2}$ inches), three-ply tin clad (2 $\frac{5}{8}$ inches) or "FyeR-Wall" sheet metal doors.

Fourth—Thickness of wall, when wall bolts are required, or when doors are used on both sides of wall, in which case special U Wall plates are required for guide rollers, when walls are less than 12" thick.

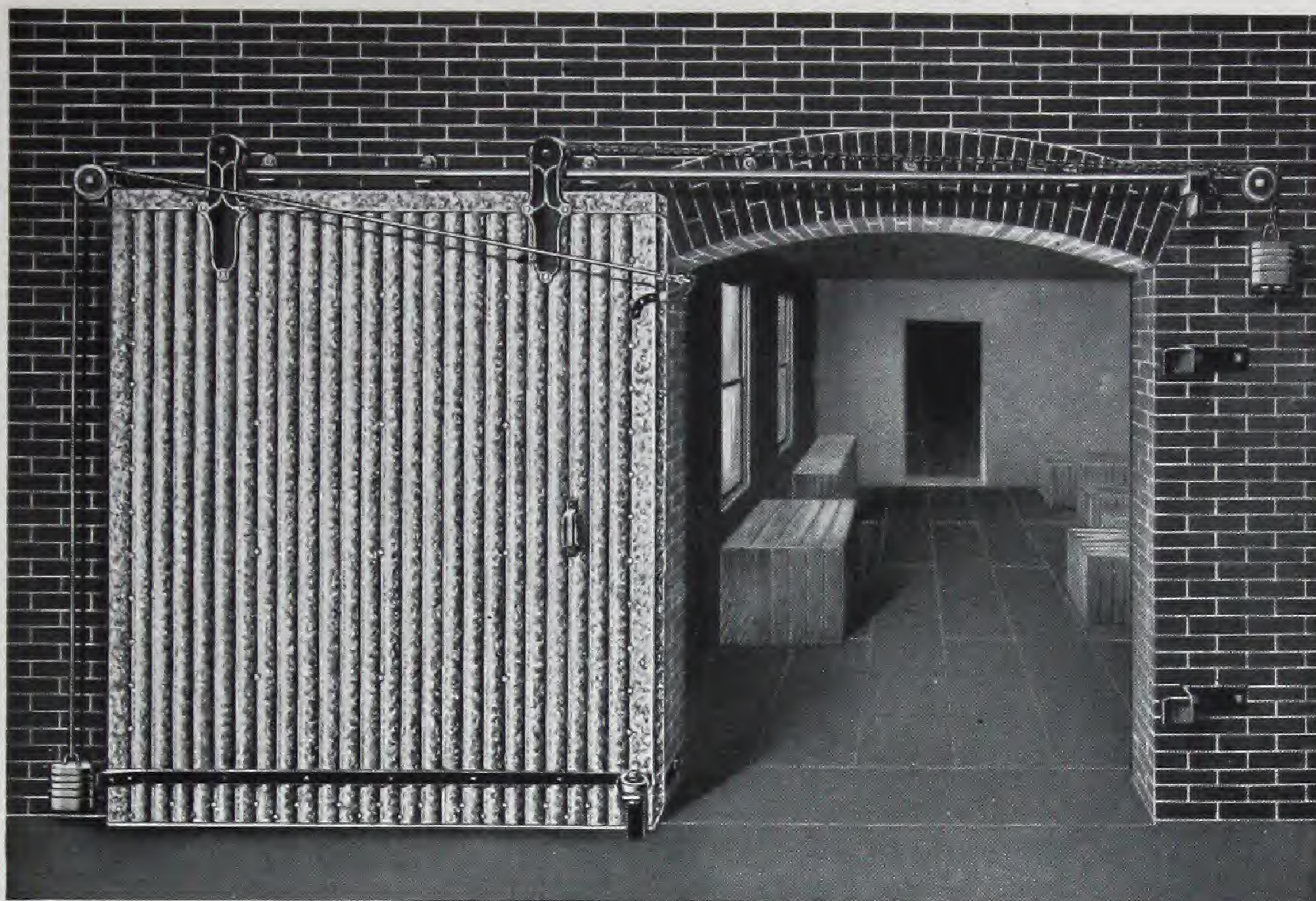
Fifth—Distance from edge of opening to walls at right angles, if any. State distances from highest points of openings to nearest obstructions overhead.

NOTE: This fixture requires 12" of headroom, 19" of wall space on side toward which the door slides in closing, and width of opening plus 15" on opposite side of opening. Adjustable hangers require two inches additional headroom.

Detail of parts shown on pages 20-21. See pages 82-85 for R-W Standard Approved and Labeled Tin-Clad, and R-W "FyeR-Wall" sheet metal doors. Hardware suitable for Saino and Merchant & Evans doors furnished when required.



R-W Single Link Round Track Fire Door Fixtures



No. 1641 Fire Door Fixtures Applied to "FyeR-Wall" Sheet Metal Doors

List Price for Nos. 641-2, 641-3 and 1641 Fire Door Fixtures

Price list includes non-adjustable hangers, track and fixtures complete for doors when used on one side of wall only. If doors are to be used on both sides of wall, double sets will be required and the price will be doubled. Fixtures packed complete with all bolts and screws for attaching parts to door, heavy cast washers for wall bolts and necessary counter-balance weights. Weights are furnished regularly for openings 8' high. If opening is higher, additional weights are required.

Wall bolts are not included but will be furnished at moderate price if thickness of wall is given.

Width of Opening with 1 pr. Hangers	List Price	Weight pe Set, Lbs.	*Width of Opening With 1½ pr. Hangers	List Price	Weight per Set, Lbs.
3 feet	\$19.95	160	6½ feet	\$26.10	232
3½ feet	20.55	166	7 feet	26.65	237
4 feet	21.10	180	7½ feet	27.20	243
4½ feet	21.60	186	8 feet	27.80	251
5 feet	22.15	191	8½ feet	28.40	257
5½ feet	22.75	203	9 feet	29.05	271
6 feet	23.40	211	9½ feet	29.70	278
			10 feet	30.30	283

No. 641-2, No. 641-3 or No. 1641 Automatics only, weight 59 lbs. Per set	\$ 6.00
No. 641-2, No. 641-3 or No. 1641 Fixtures only, less Hangers, Track and Brackets; Binder, Chafe and Guide Roll Strips, weight 119 lbs. Per set	10.70
†No. 542-C Track only with Brackets, for two-ply tin clad doors, weight 2¼ lbs. Per foot	.34
†No. 542-C Track only with Brackets, for three-ply tin clad doors, or "FyeR-Wall" Sheet Metal Doors, weight 2¼ lbs. Per foot	.34
No. 542-Cx641 Hangers only with Back Plates, used with No. 641-2 Hardware, (page 52), weight 25½ lbs. Per pair	4.20
No. 542-Cx641 Hangers only, used with No. 641-3 Hardware, (page 52), weight 22 lbs. Per pair	4.20
No. 742x1641 Hangers with Back Plates, used with No. 1641 Hardware, (page 52), wt. 25½ lbs. Per pair	4.20
No. 642-5 Adjustable Hangers only, (page 52), weight 32 lbs. Per pair	8.50

†Length of track equals width of opening plus 15½"

*For openings, (not doors), over 6' wide, Underwriters require three hangers.

Discount.....



R-W Single Link Flat Track Fire Door Fixtures

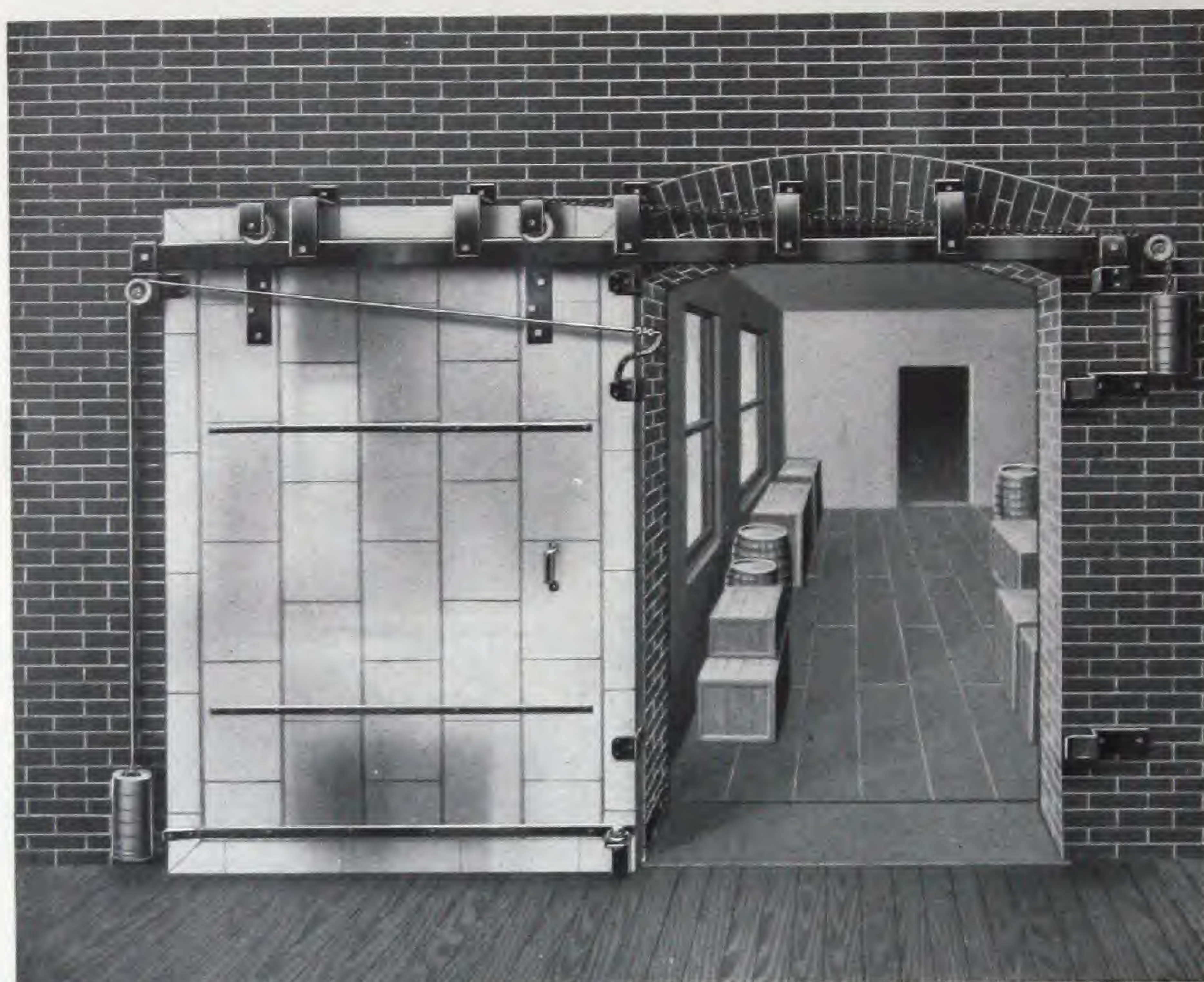
For Single Sliding Doors, Drop Bracket Level Track.

R-W No. 304-2 For Two-ply (1- $\frac{3}{4}$ inch) Tin Clad Doors.

R-W No. 304-3 For Three-ply (2- $\frac{5}{8}$ inch) Tin Clad Doors.

R-W No. 1304 For "FyeR-Wall" Sheet Metal Doors.

(Requires 8" Headroom).



No. 304 Fire Door Fixtures Applied to Tin Clad Fire Door.

This style fixture is operated the same as No. 303, illustrated on pages 38-39, except the track is dropped down in front of door, reducing the amount of headroom required.

This type has but one fusible link, which is exposed in the opening.

DIRECTIONS FOR ORDERING

STATE: First—Number of openings and number of doors; whether doors are on one side or both sides of wall. If latter, mention if fixtures can be bolted together and state thickness of wall. Do not say doors when you mean openings, as doors must lap four inches on each side and at top.

Second—Width and height of opening, (mention width first.)

Third—Thickness of doors, if two-ply tin clad (1 $\frac{3}{4}$ inches), three ply tin clad (2 $\frac{5}{8}$ inches), or "FyeR-Wall" Sheet Metal Doors.

Fourth—Thickness of wall, when wall bolts are required, or when doors are used on both sides of wall, in which case special U wall plates are required for guide rollers, when walls are less than 12" thick.

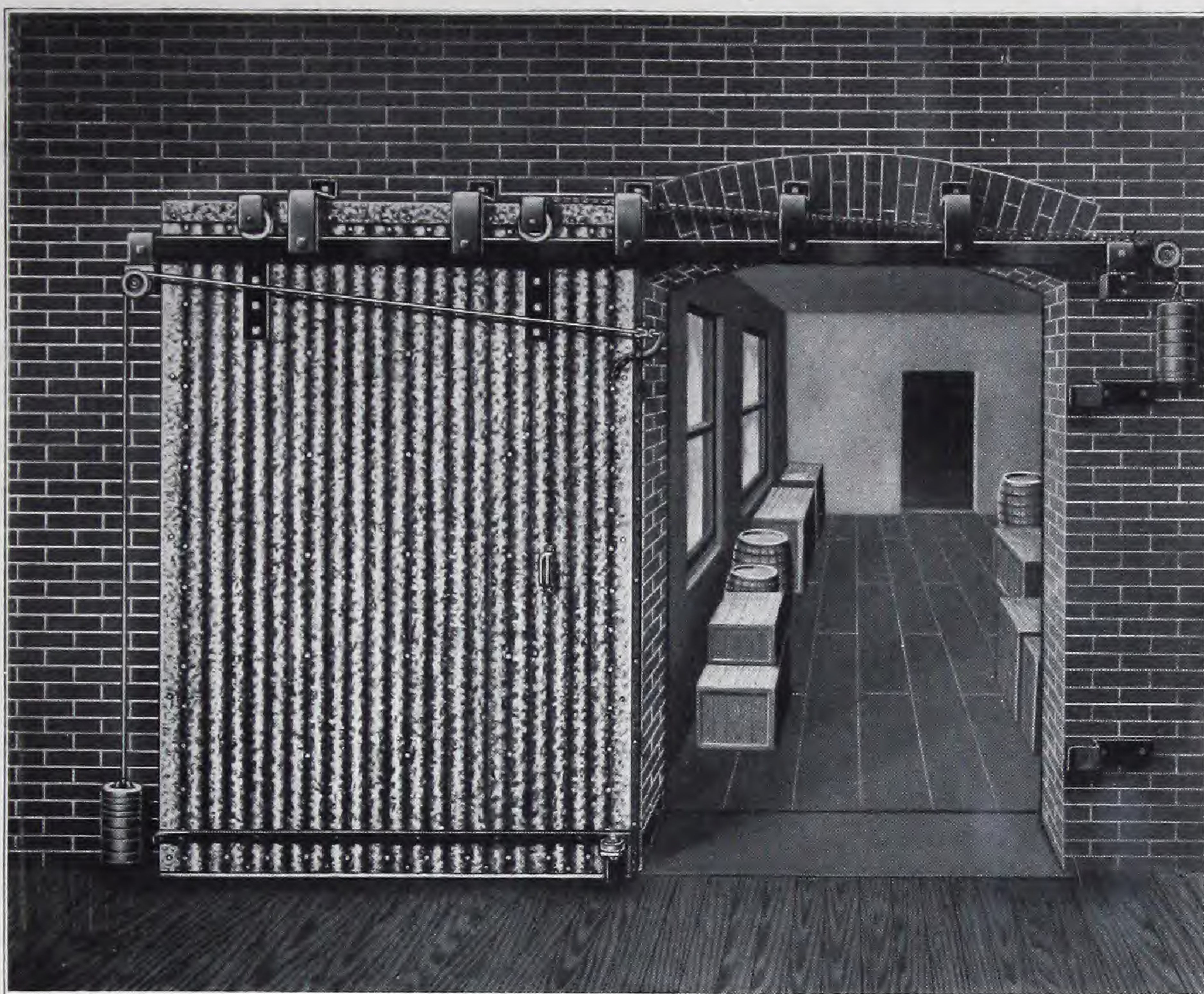
Fifth—Distance from edge of opening to walls at right angles, if any. State distances from highest points of openings to nearest obstructions overhead.

NOTE: Minimum clearances and special automatic closing arrangements are shown on page 47. Unless otherwise specified Standard Style will be furnished.

Details of parts shown on pages 20-21. See pages 82-85 for R-W Standard Approved and Labeled Tin Clad, and R-W "FyeR-Wall" sheet metal doors. Hardware suitable for Saino and Merchant & Evans doors, furnished when required.



R-W Single Link Flat Track Fire Door Fixtures



No. 1304 Fire Door Fixtures Applied to "FyeR-Wall" Sheet Metal Doors

List Price for Nos. 304-2, 304-3 and 1304 Fire Door Fixtures

List price includes hangers, track and fixtures complete for doors when used on one side of wall only. If doors are to be used on both sides of wall, double sets will be required and the price will be doubled. Fixtures packed complete with all bolts and screws for attaching parts to door, heavy cast washers for wall bolts and necessary counter-balance weights. Weights are furnished regularly for openings 8' high. If opening is higher, additional weights are required.

Wall bolts are not included, but will be furnished at moderate price if thickness of wall is given.

Width of Opening with 1 pr. Hangers	List Price	Weight Per Set, Lbs.	*Width of Opening with 1½ pr. Hangers	List Price	Weight Per Set, Lbs.
3 feet	\$23.70	211	6½ feet	\$32.35	299
3½ feet	24.30	217	7 feet	32.90	304
4 feet	24.80	227	7½ feet	33.45	310
4½ feet	25.35	235	8 feet	36.55	344
5 feet	27.15	250	8½ feet	37.15	350
5½ feet	29.00	268	9 feet	37.70	377
6 feet	29.65	278	9½ feet	39.05	383
			10 feet	40.30	388

No. 304-2, No. 304-3 or No. 1304, Automatics only, weight 37½ lbs. Per set.....\$ 6.10

No. 304-2, No. 304-3 or No. 1304 Fixtures only, less Hangers, Track and Brackets; Binders, Chafe and Guide

Roll Strips, weight 102 lbs. Per set..... 12.00

†No. 304-84 Track only, with brackets, for two-ply tin clad doors, weight 8 lbs. Per foot..... 1.15

†No. 304-84 Track only, with brackets, for three-ply tin clad doors or "FyeR-Wall" sheet metal doors, weight 8¼ lbs. Per foot..... 1.15

No. 102-3x303 Hangers only, used with No. 304-2 or No. 304-3 Hardware (page 52), weight 30 lbs. Per pair 4.10

No. 1102x1303 Hangers with Back Plates, used with No. 1304 Hardware, (page 52), weight 33½ lbs. Per pair 4.10

*For openings, (not doors), over 6' wide, Underwriters require three hangers.

†Length of track equals twice width of opening plus 29".

Discount.....

Packing List for R-W Nos. 304-2, 304-3 and No. 1304 Fire Door Fixtures. Standard Style

304-2	304-3	1304	DESCRIPTION	List Price
1	..	..	No. 70-1 Flush Pull, each	\$.20
..	1	..	No. 70-2 Flush Pull, each.....	.25
1	..	..	No. 71-1 Bow Handle, each.....	.10
..	1	..	No. 71-2 Bow Handle, each.....	.15
..	..	1	No. 71-3 Bow Handle, each.....	.20
..	..	1	No. 71-4 Bow Handle, each.....	.25
*	*	*	No. 102-SC Sash Cord (as required). Per ft.....	.05
*	*	*	No. 102-61 Cast Washers. (See table below), each.....	.15
8	8	..	No. 102-72 Bumper Shoes, each.....	.10
1	..	..	No. 102-80-2 Guide Roller. (For Angle Iron Sills only), each..	2.00
..	1	1	No. 102-80-3 Guide Roller (For Angle Iron Sills only), each.	2.00
2	2	..	No. 102-82 Binder Strips. Length equals width of opening less 4", each .....	.40
1	1	1	No. 102-88 Guide Roll Strip. Length equals width of opening plus 3", (Plus 6" for No. 1304), each.....	.80
2	2	..	No. 102-89 Chafe Strips. Length equals width of opening less 4", each .....	.40
2	2	2	No. 102-91 Weight Holders, each .....	.15
2	..	..	No. 102-95-2 Binders, each .....	.80
..	2	2	No. 102-95-3 Binders, each .....	.80
1	1	1	No. 102-97 Link Bracket with No. 96 Fusible Link attached, complete .....	.55
1	1	1	No. 102-98 Wedge, each .....	.10
*	*	*	No. 102-99 No. 1 Lightweight. (According to size of opening) each .....	.25
*	*	*	No. 102-99 No. 2 Heavyweights. (According to size of open- ing), each .....	.75
1	..	..	†No. 156-2 Guide Roller. (Omit for angle iron sills), each....	2.00
..	1	1	*No. 156-3 Guide Roller. (Omit for angle iron sills), each....	2.00
*	*	*	No. 303-STC Sash Chain. Length equals width of opening plus 4', per ft. ....	.10
1 Pr.	1 Pr.	..	No. 303-3 Hangers. (Openings over 6' wide require 1½ pair), per pair	4.10
1	1	1	No. 303-84 Track. Length equals twice width of opening plus 29", per ft.	1.15
1	1	1	No. 304-SB Pulley, each .....	.70
*	..	..	No. 304-DB-2 Drop Brackets. (See table below), each.....	1.25
..	*	*	No. 304-DB-3 Drop Brackets. (See table below), each.....	1.25
2	..	..	No. 304-85-2 End Cone Brackets, each.....	.30
..	2	2	No. 304-85-3 End Cone Brackets, each.....	.30
1	1	1	No. 304-86 Rope Pulley and Back Bumper, each.....	1.50
1	1	1	No. 304-87 Front Bumper, each	1.00
..	..	1	No. 1102-93 Rear Binder Pocket, each.....	1.00
..	..	1	No. 1102-94 Rear Binder Hook, each .....	.80
..	..	1	No. 1303 Hangers with backplates. (Openings over 6' wide re- quire 1½ pair), per pair.....	4.10
1	1	1	Package Screws and Bolts	

†No. 56-2 Boston Guide Roller may be substituted for this item if desired.
*No. 56-3 Boston Guide Roller may be substituted for this item if desired.

Discount.....

Table of No. 304DB-2 and No. 304DB-3 Drop Brackets and No. 102-61 Washers for Above Fixtures.

Width of Opening	No. of (304-DB) Brackets	*Number of Washers
2' 0" to 4' 8"	3	10
4' 9" to 5' 2"	4	11
5' 3" to 7' 8"	5	12
7' 9" to 8' 8"	7	14
8' 9" to 11' 8"	8	15
11' 9" to 13' 0"	9	16
	Fixtures Only Require	5

*No. 1304 Fixtures require one more washer than shown above.

Wall Bolt List for No. 304-2, No. 304-3 and No. 1304 Fire Door Fixtures

Wall bolts are not furnished with sets of fixtures regularly, but will be furnished at prevailing market prices when thickness of wall is given and customer requests them. The table below gives the number and size of bolts required for various sized openings. Note that the number of bolts is the same for hardware installed on one or both sides of wall.

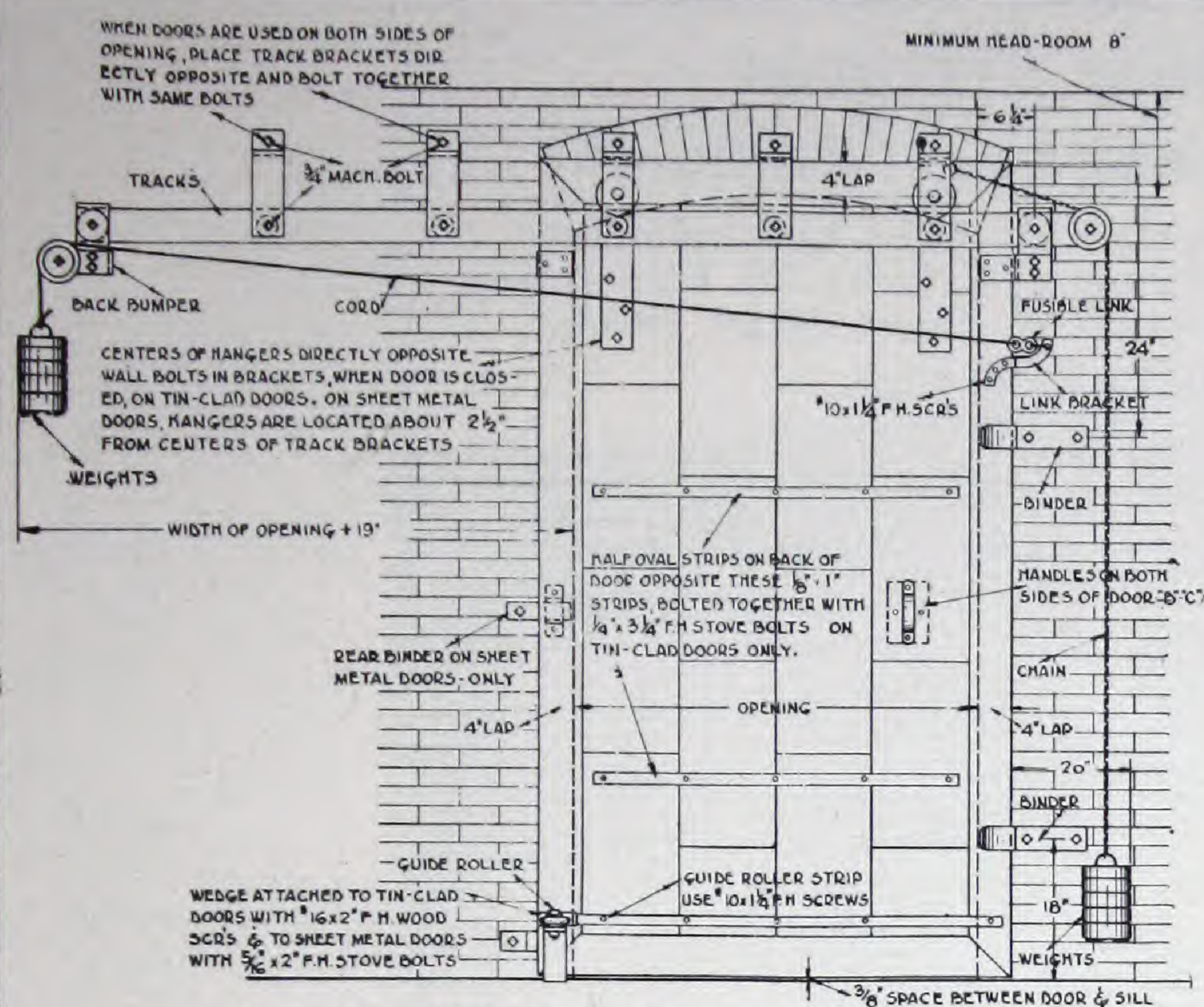
NUMBER OF ¾" BOLTS REQUIRED FOR VARYING WIDTHS OF DOORWAY OPENINGS

Fixture Bolts are Used to Fasten	LENGTH OF BOLTS REQUIRED FOR SETS INSTALLED					
	Opening 0" to 4' 8"	Opening 4' to 5' 2"	Opening 5' to 7' 8"	Opening 7' to 8' 8"	Opening 8' to 11' 8"	Opening 11' to 13' 0"
Binders	4	4	4	4	4	4
*Guide Roller	1	1	1	1	1	1
Drop Brackets	3	4	5	7	8	9
End Track Brackets.....	2	2	2	2	2	2
Rear Binder Hook for No. 1304 Fixtures only ..	1	1	1	1	1	1
Total Bolts in Nos. 304-2 and 304-3 sets only..	10	11	12	14	15	16
Total Bolts in No. 1304 sets.....	11	12	13	15	16	17

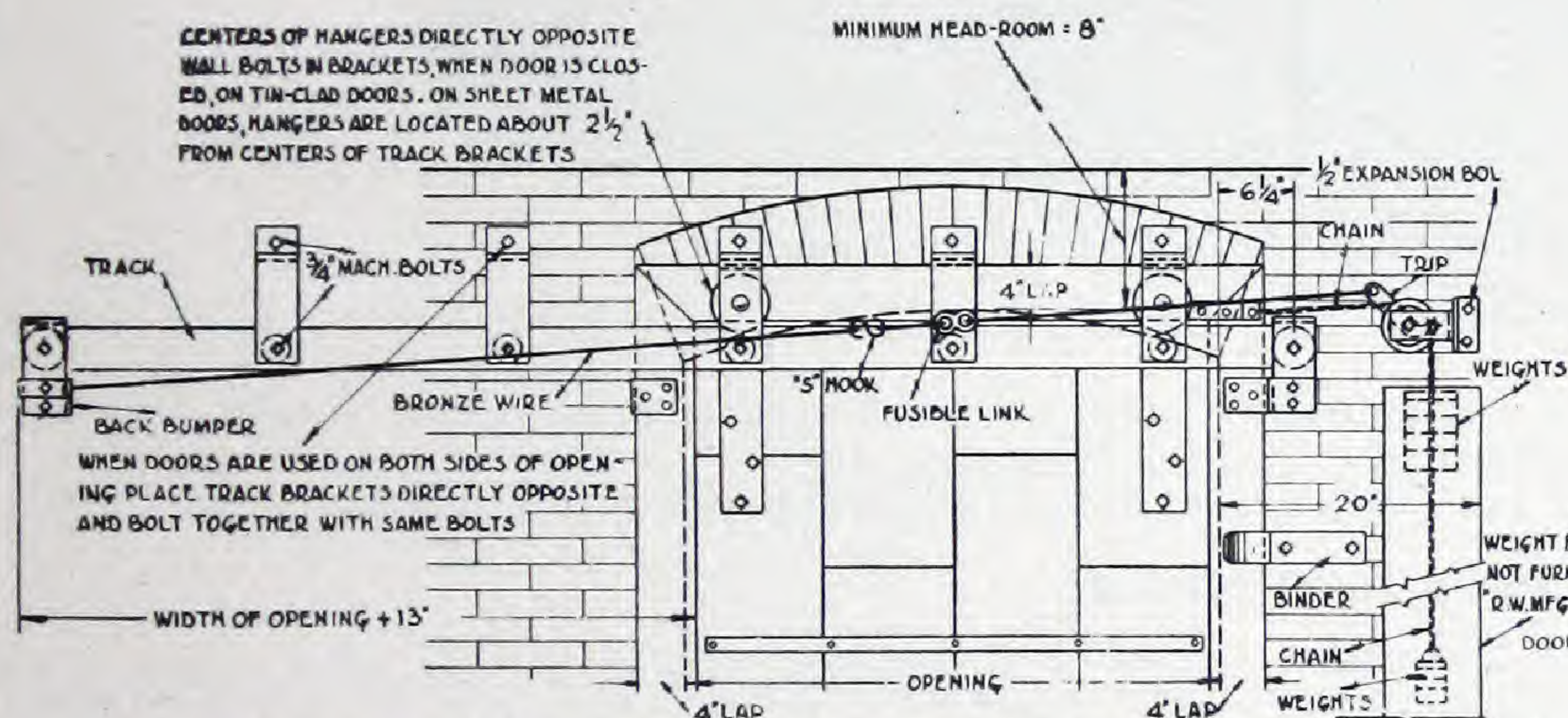
*Wall bolts not needed when 102-80 Guide Rollers are used.

†For two-ply tin clad doors, wall thickness plus 6".

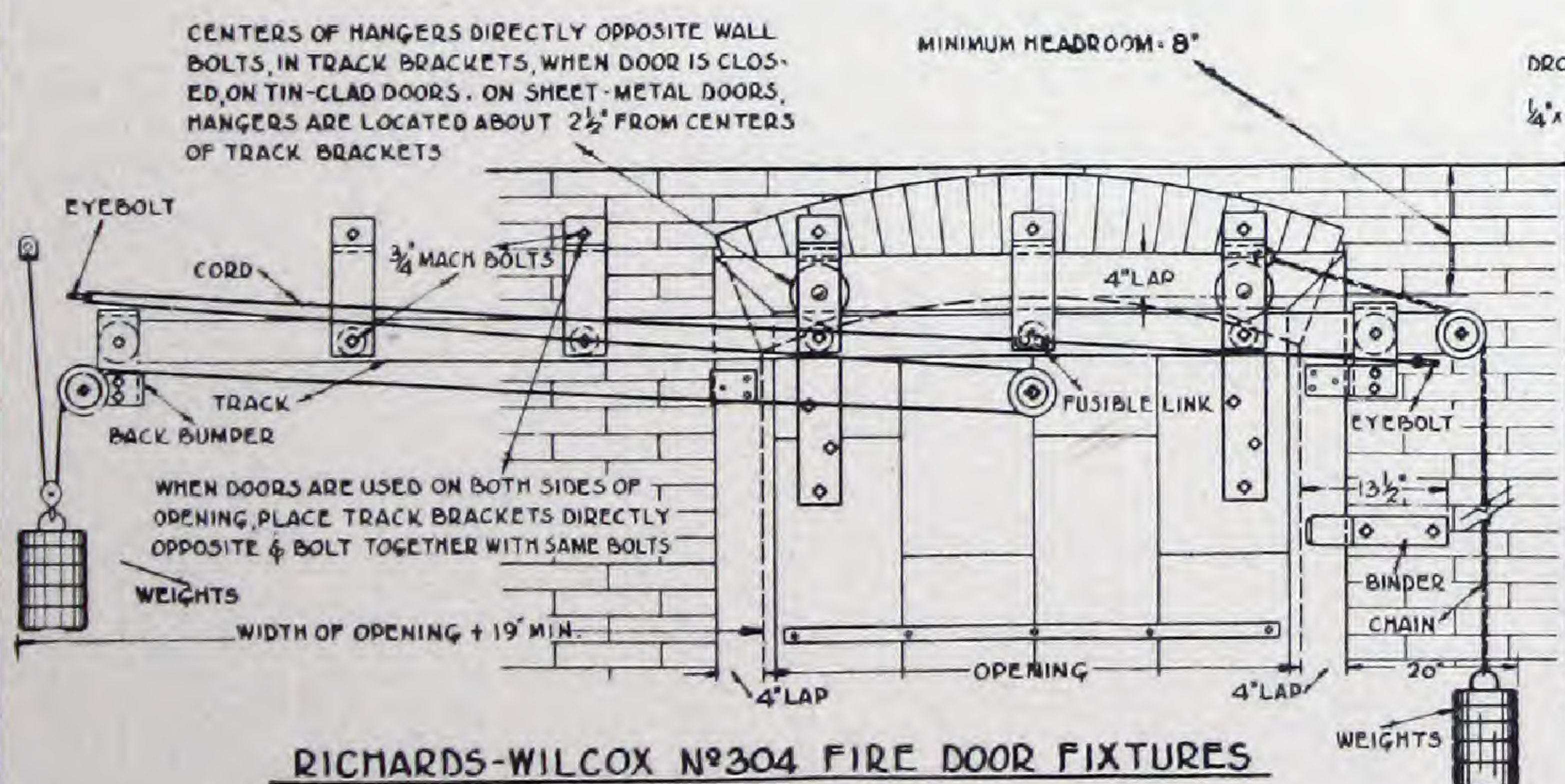
‡For two-ply tin clad doors, wall thickness plus 9".



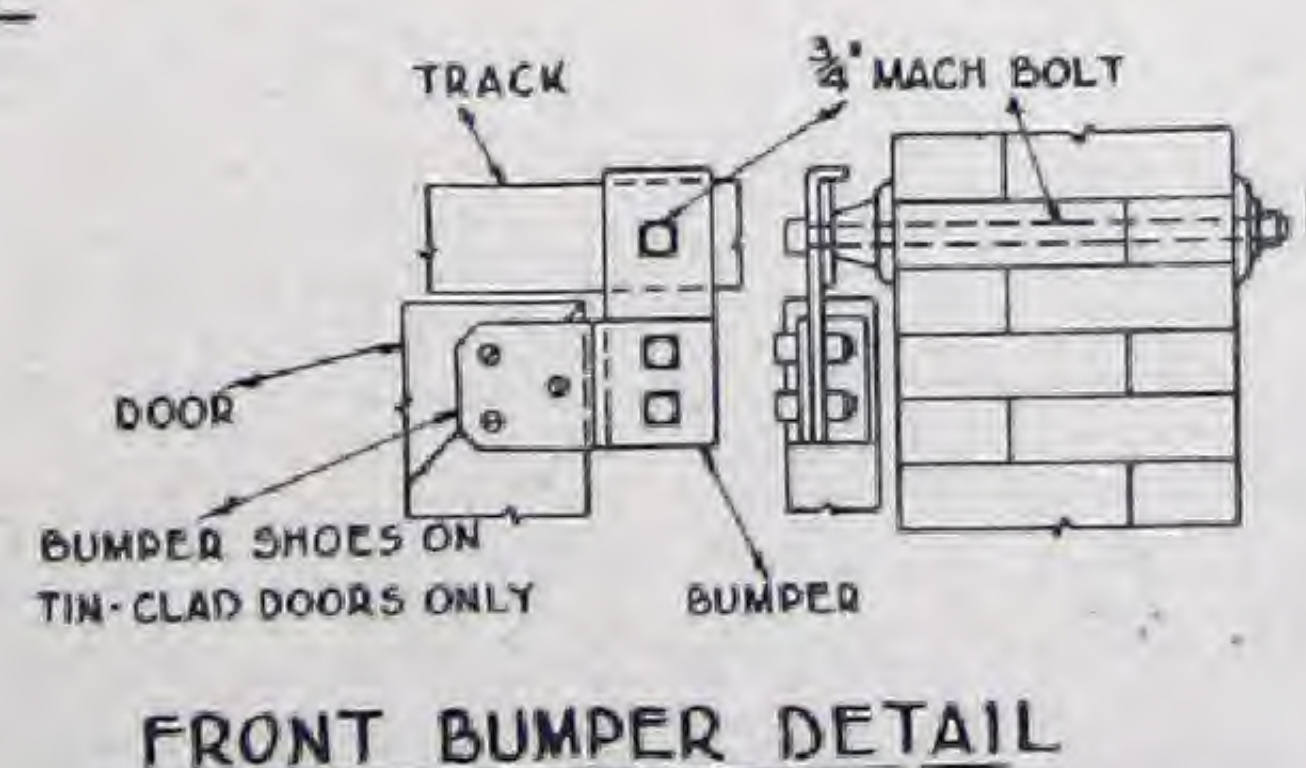
**RICHARDS-WILCOX No. 304 FIRE DOOR FIXTURES
STANDARD STYLE**



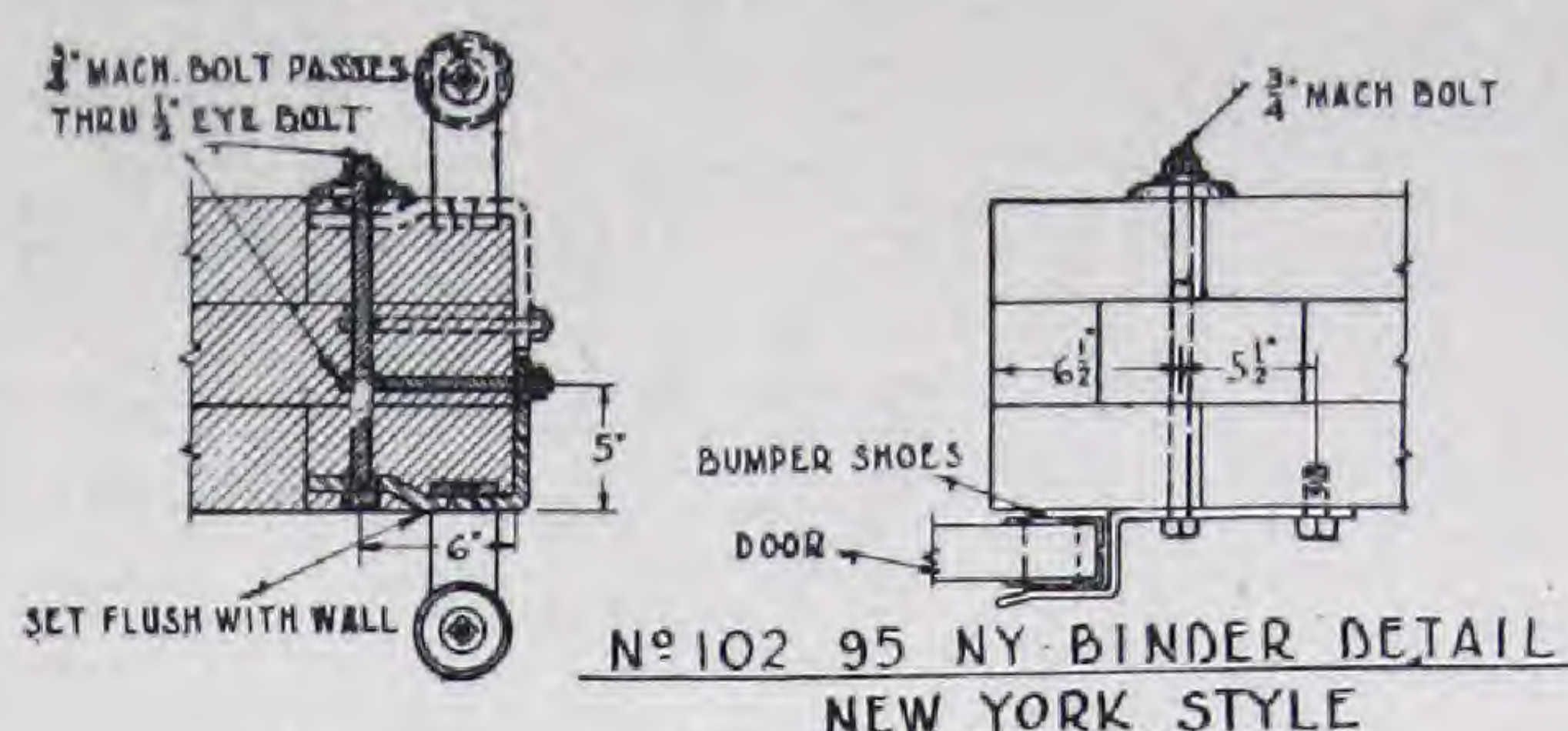
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CHICAGO STYLE**



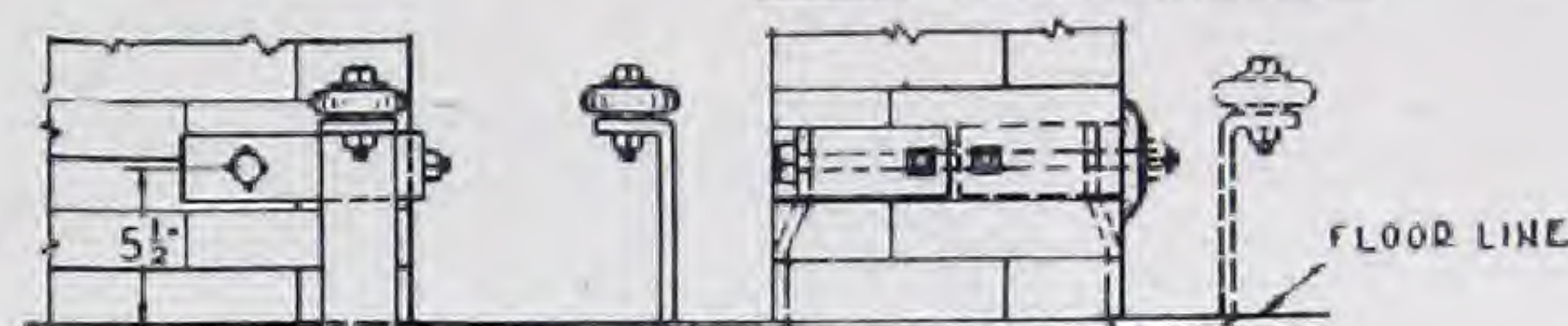
**RICHARDS-WILCOX No. 304 FIRE DOOR FIXTURES
CINCINNATI STYLE**



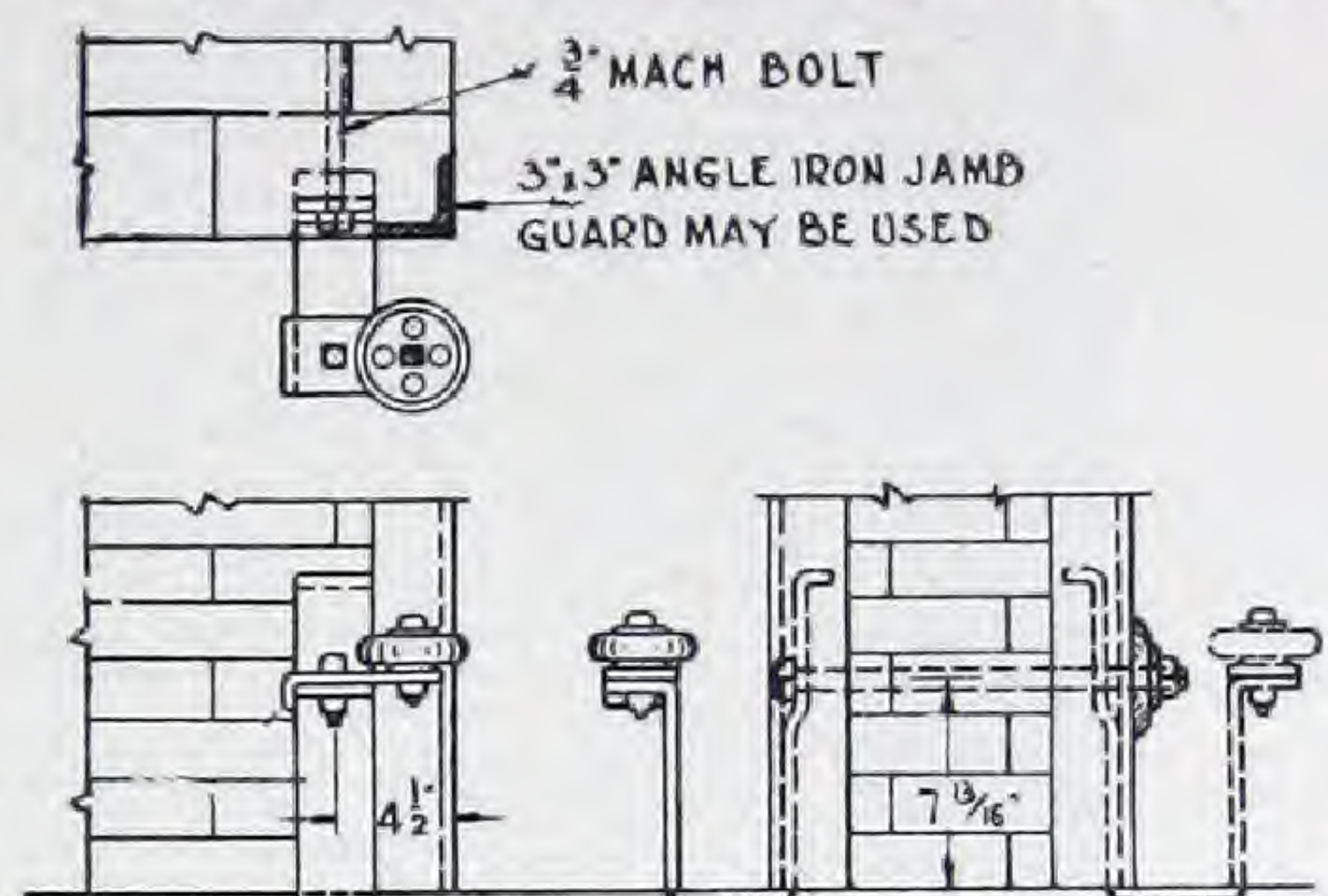
FRONT BUMPER DETAIL



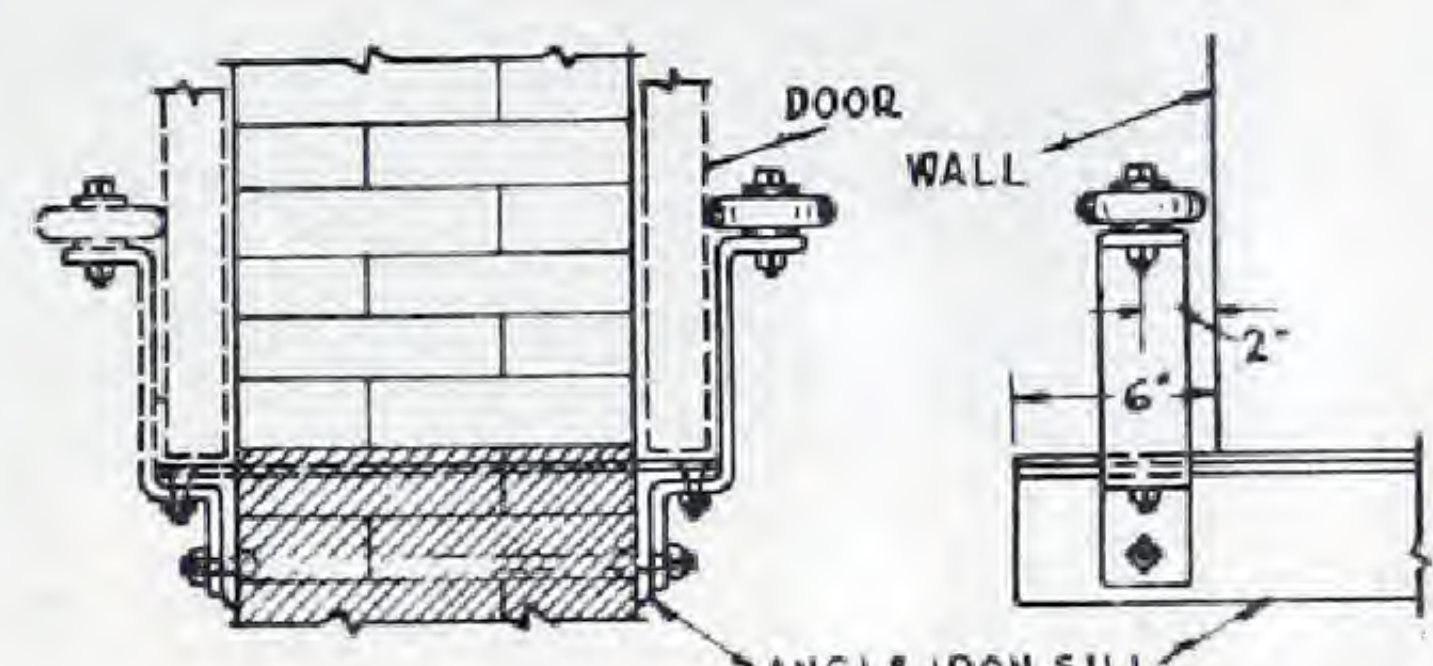
**No. 102-95 NY BINDER DETAIL
NEW YORK STYLE**



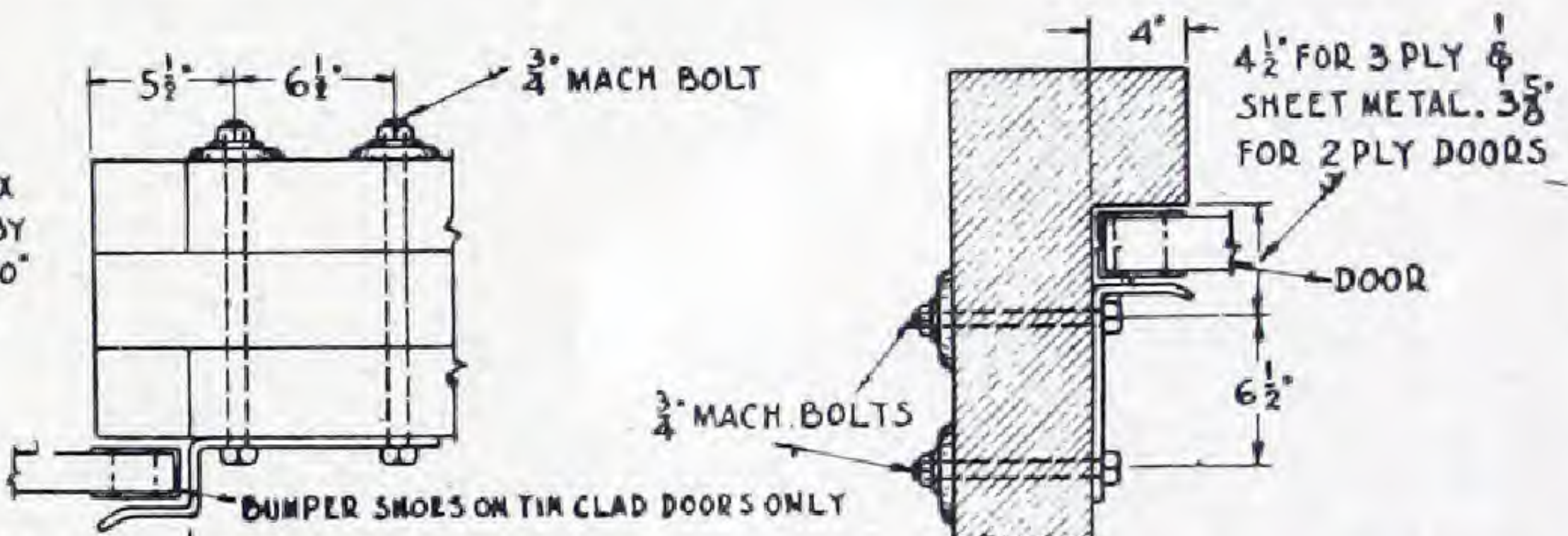
**No. 156 GUIDE ROLLER DETAILS
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING**



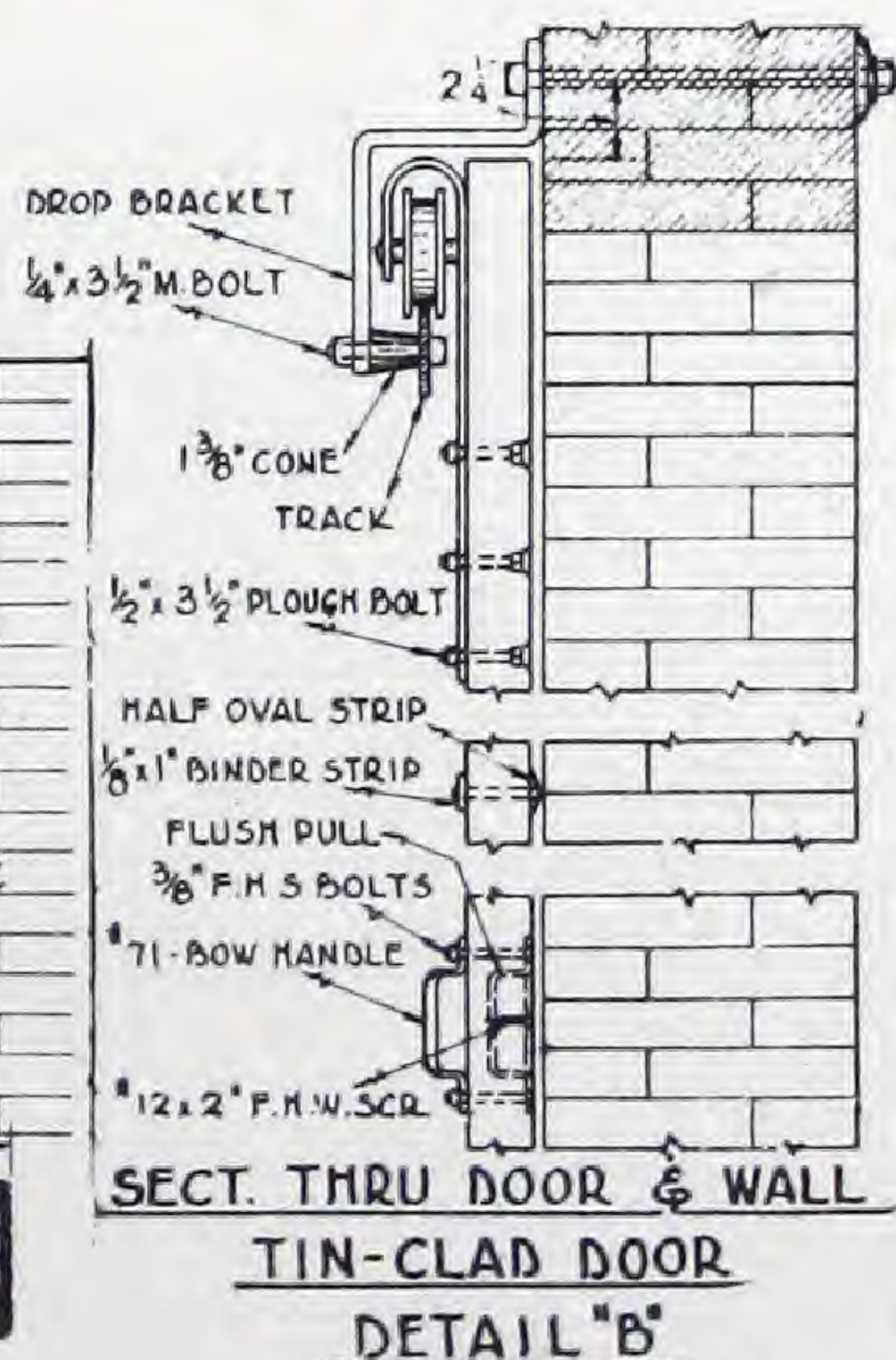
**No. 56 BOSTON GUIDE ROLLER DETAIL
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING**



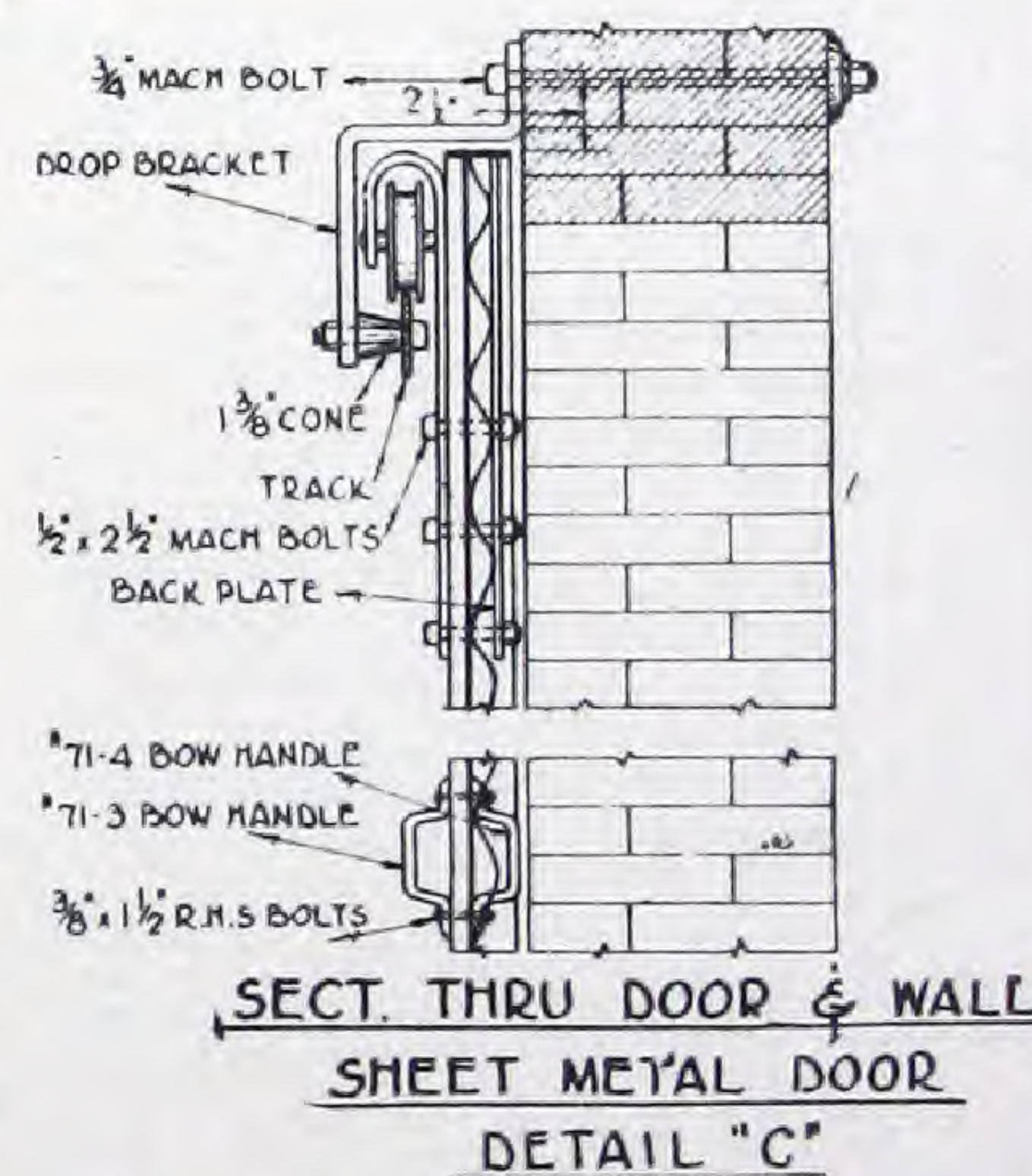
**No. 102-80 GUIDE ROLLER DETAIL
SEE DOTTED LINES FOR DOORS ON BOTH SIDES OF OPENING**



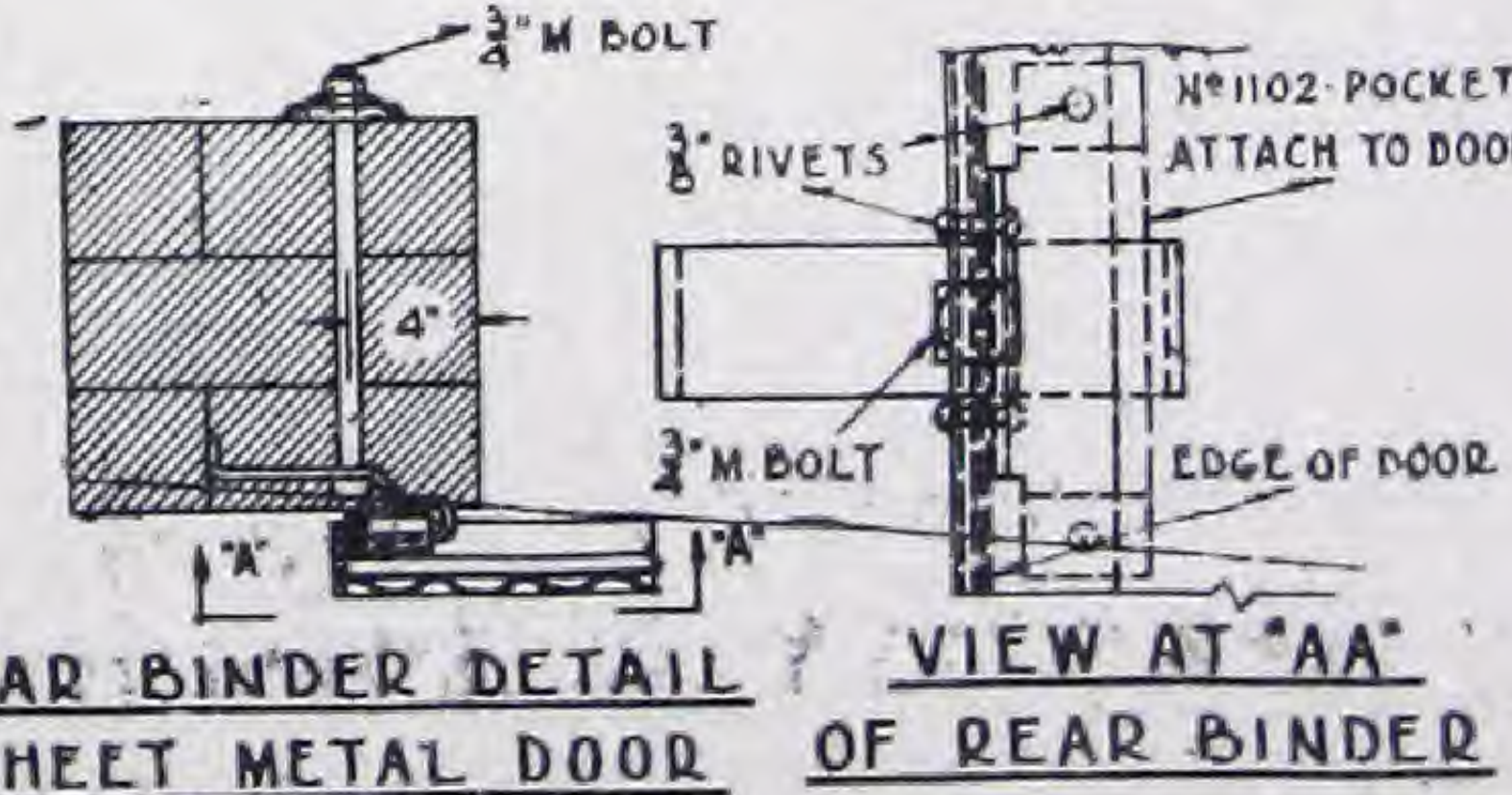
No. 102-95 BINDER DETAIL No. 102-94 RIGHT ANGLE BINDER



**SECT. THRU DOOR & WALL
TIN-CLAD DOOR
DETAIL "B"**



**SECT. THRU DOOR & WALL
SHEET METAL DOOR
DETAIL "C"**

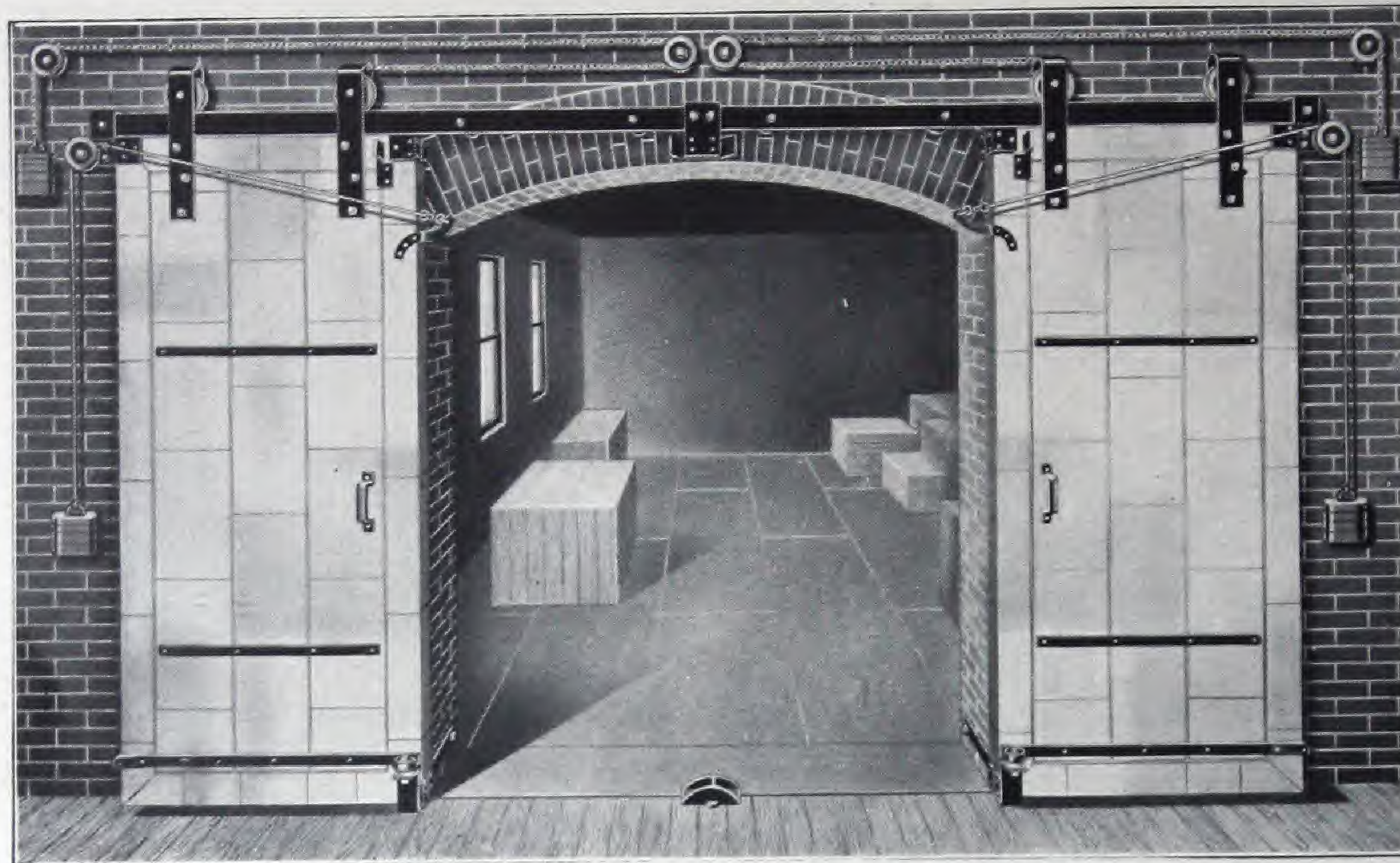


**REAR BINDER DETAIL
SHEET METAL DOOR
VIEW AT "AA" OF REAR BINDER**

R-W Single Link Flat Track Fire Door Fixtures

For Pairs of Sliding Doors Level Track

R-W No. 302-2 For Two-ply (1 $\frac{3}{4}$ inch) tin Clad Doors.
R-W No. 302-3 For Three-ply (2 $\frac{5}{8}$ inch) Tin Clad Doors.
R-W No. 1302 For "FyeR-Wall" Sheet Metal Doors.
(Requires 17" Headroom).



No. 302 Fire Door Fixtures Applied to Tin Clad Fire Doors.

The above fixture is operated the same as regular No. 303 illustrated on pages 38-39 except using double sliding doors.

Designed to meet special conditions such as not sufficient wall space on one side to slid a single door and where low headroom will not permit the use of regular No. 204 fixtures.

This type has one fusible link on each door and both are exposed in the opening at all times.

Directions for Ordering.

See page 38 and give all information asked for.

NOTE: This fixture requires 17 inches of headroom for non-adjustable hangers and half the width of opening plus 20 inches wall space on each side of opening. Add three inches headroom for adjustable hangers.

Detail of parts shown on pages 20-21. See pages 82-85 for R-W Standard Approved and Labeled Tin Clad, and R-W "FyeR-Wall" sheet metal doors. Hardware suitable for Saino and Merchant and Evans Doors furnished when required.

List Price for Nos. 302-2, 302-3, and 1302 Fire Door Fixtures

List price includes non-adjustable hangers, track and fixtures complete for doors when used on one side of wall only. If doors are to be used on both sides of wall, double sets will be required and the price will be doubled. Fixtures packed complete with all bolts and screws for attaching parts to door, heavy cast washers for wall bolts and necessary counter-balance weights. Weights are furnished regularly for openings 8' high. If opening is higher, additional weights are required.

Wall bolts are not included, but will be furnished at moderate price if thickness of wall is given.

Width of Opening with 2 pr. Hangers	List Price	Weight per Set, Lbs.	Width of Opening with 2 pr. Hangers.	List Price	Weight per Set, Lbs.
3 feet	\$36.40	264	7 feet	\$42.40	326
3 $\frac{1}{2}$ feet	37.10	269	7 $\frac{1}{2}$ feet	43.10	331
4 feet	37.80	275	8 feet	43.80	337
4 $\frac{1}{2}$ feet	38.50	292	8 $\frac{1}{2}$ feet	44.50	342
5 feet	39.20	298	9 feet	45.20	360
5 $\frac{1}{2}$ feet	39.90	303	9 $\frac{1}{2}$ feet	45.90	365
6 feet	40.60	309	10 feet	46.60	371
6 $\frac{1}{2}$ feet	41.70	320			

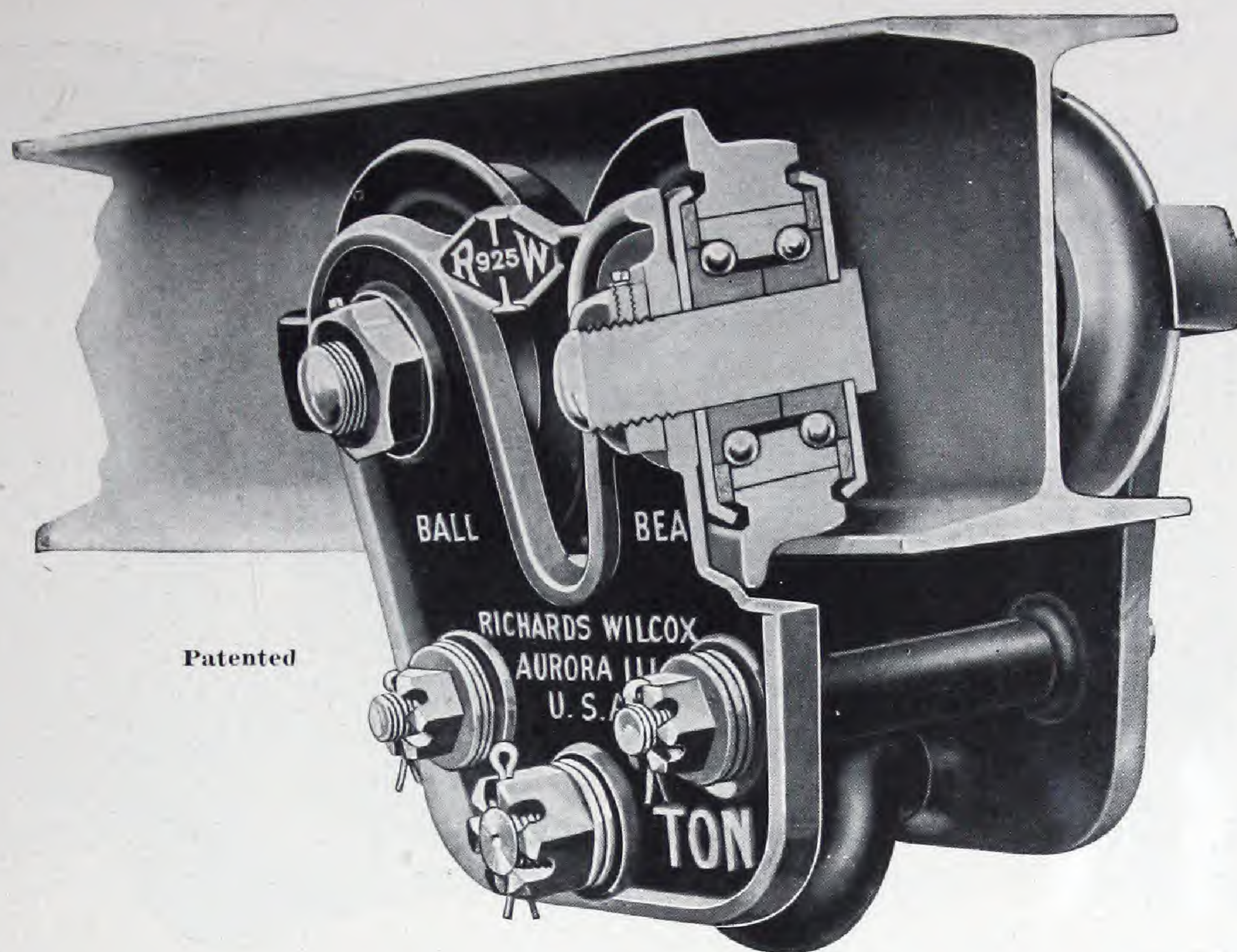
No. 302-2, No. 302-3 or No. 1302 Automatics only, weight 79 lbs. Per set.....	\$12.00
No. 302-2, No. 302-3 or No. 1302 fixtures only, less Hangers, Track and Brackets; Binder, Chafe and Guide	
Roll Strips, weight 158 lbs. Per set.....	23.00
†No. 204-84 Track only with brackets, weight 4 $\frac{1}{2}$ lbs. Per foot .....	.40
No. 102-2 x 303 Hangers only, (page 52) used with No. 302-2 fixtures, weight 30 lbs. Per pair	4.10
No. 102-3 x 303 Hangers only (page 52) used with No. 302-3 fixtures, weight 30 lbs. Per pair.....	4.10
No. 1102 x 1302 Hangers only, with Back Plates (page 52), used with No. 1302 fixtures, wt. 35 lbs. Per pair..	4.10
No. 202 x 303 Adjustable Hangers only, (page 52), weight 35 lbs. Per pair.....	7.00

†Length of each track equals width of opening plus 8 inches.

Discount.....

Richards-Wilcox Mfg. Co. Aurora, Illinois

R-W NO. 925
BALL-BEARING I-BEAM TROLLEYS



Made
In
Seven
Sizes

Each Trolley
Adjustable to
Three Sizes
of I-Beams

Patented

Exceptionally Easy Operating Trolleys

High test malleable iron side plates and yoke. Wheels of hard grey iron with treads crowned to give minimum friction and chilled to give maximum hardness and minimum wear. Short wheel base operates easily on curves. Combination radial and thrust bearings, ball races are ground. High duty "AA" grade chrome alloy steel balls. Felt washers prevent dust and dirt from reaching bearings and provide perfect lubrication, as felt absorbs oil from oil hole and transmits it to bearings continually. Spreader rods set loose in oversized holes so that trolley sides can pivot about the load pin, insuring even distribution of load on all four wheels under all conditions. Bumpers on the end of frame sides prevents trolleys from damaging wheel flanges when running together.

List Price and Dimension Table

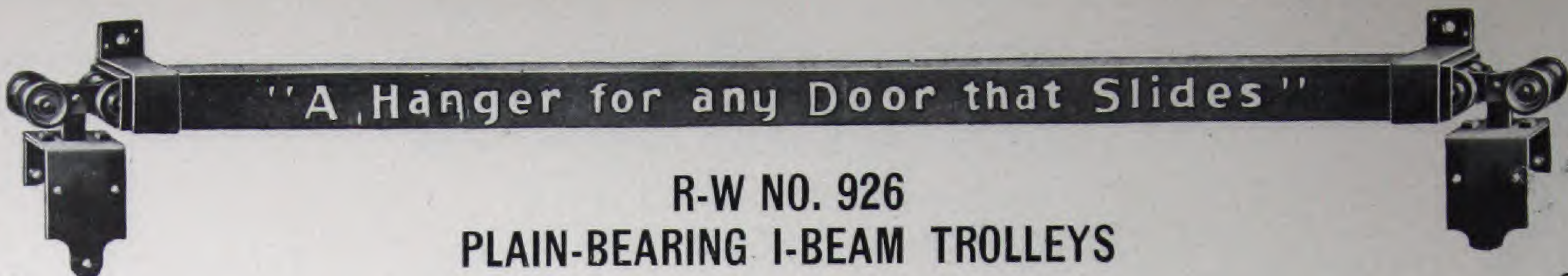
No. and Capacity of Trolley Tons	*Standard Size of I-Beams, Inches	Width of Wheel-Tread, Inches	Diam. of Wheels on Tread, Inches	Wheel Centers, Inches	Length Over All, Inches	Clearance Below I-Beam, Inches	Distance from Bottom of I-Beam to yoke, Inches	Diameter of Yoke, Inches	Width Over All, Inches	Pull Required to Start Full Load, Lbs.	Weight, Lbs.	List Price, Each
			A	B	C	D	E	F	**G			
925— $\frac{1}{4}$	4, 5, 6	$\frac{5}{8}$	$2\frac{1}{8}$	$3\frac{1}{8}$	$8\frac{1}{4}$	$\frac{3}{4}$	3	$\frac{1}{8}$	$6\frac{1}{4}$	10	22	\$22.00
925— $\frac{1}{2}$	5, 6, 7	$\frac{3}{4}$	$3\frac{3}{4}$	$4\frac{1}{8}$	$10\frac{1}{4}$	1	$3\frac{1}{2}$	$\frac{1}{8}$	$7\frac{1}{2}$	17	38	25.00
925—1	6, 7, 8	$\frac{1}{8}$	$4\frac{5}{8}$	$5\frac{3}{4}$	$12\frac{1}{4}$	$1\frac{1}{4}$	4	$\frac{1}{8}$	8	37	62	32.00
925— $1\frac{1}{2}$	7, 8, 9	$1\frac{1}{2}$	$5\frac{1}{2}$	$6\frac{7}{8}$	$14\frac{1}{2}$	$1\frac{1}{4}$	$4\frac{1}{2}$	$1\frac{1}{4}$	$9\frac{1}{2}$	45	84	40.00
925—2	8, 9, 10	$1\frac{3}{8}$	$6\frac{5}{8}$	$7\frac{1}{8}$	$16\frac{3}{4}$	$1\frac{1}{4}$	5	$1\frac{1}{4}$	$10\frac{1}{4}$	50	116	48.00
925—3	9, 10, 12	$1\frac{5}{8}$	$7\frac{1}{8}$	$9\frac{1}{8}$	19	$1\frac{1}{4}$	$5\frac{1}{2}$	$1\frac{1}{2}$	$11\frac{1}{4}$	75	170	64.00
925—4	10, 12, 15	$1\frac{1}{2}$	$7\frac{1}{8}$	10	21	$1\frac{1}{4}$	6	$1\frac{1}{2}$	$12\frac{1}{4}$	95	210	80.00

*Trolleys can be furnished to run on larger size beams at a list price of \$3.00 extra.

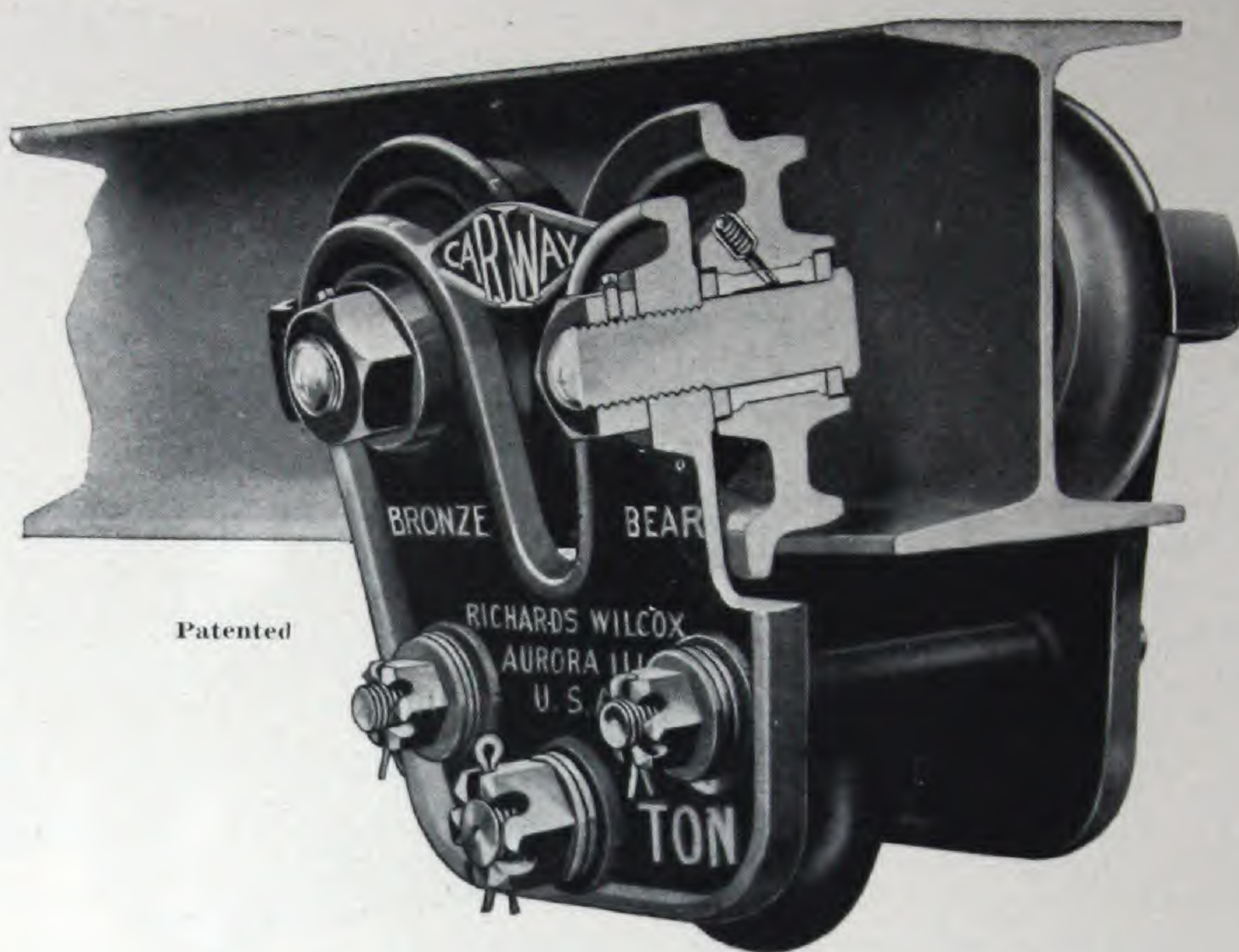
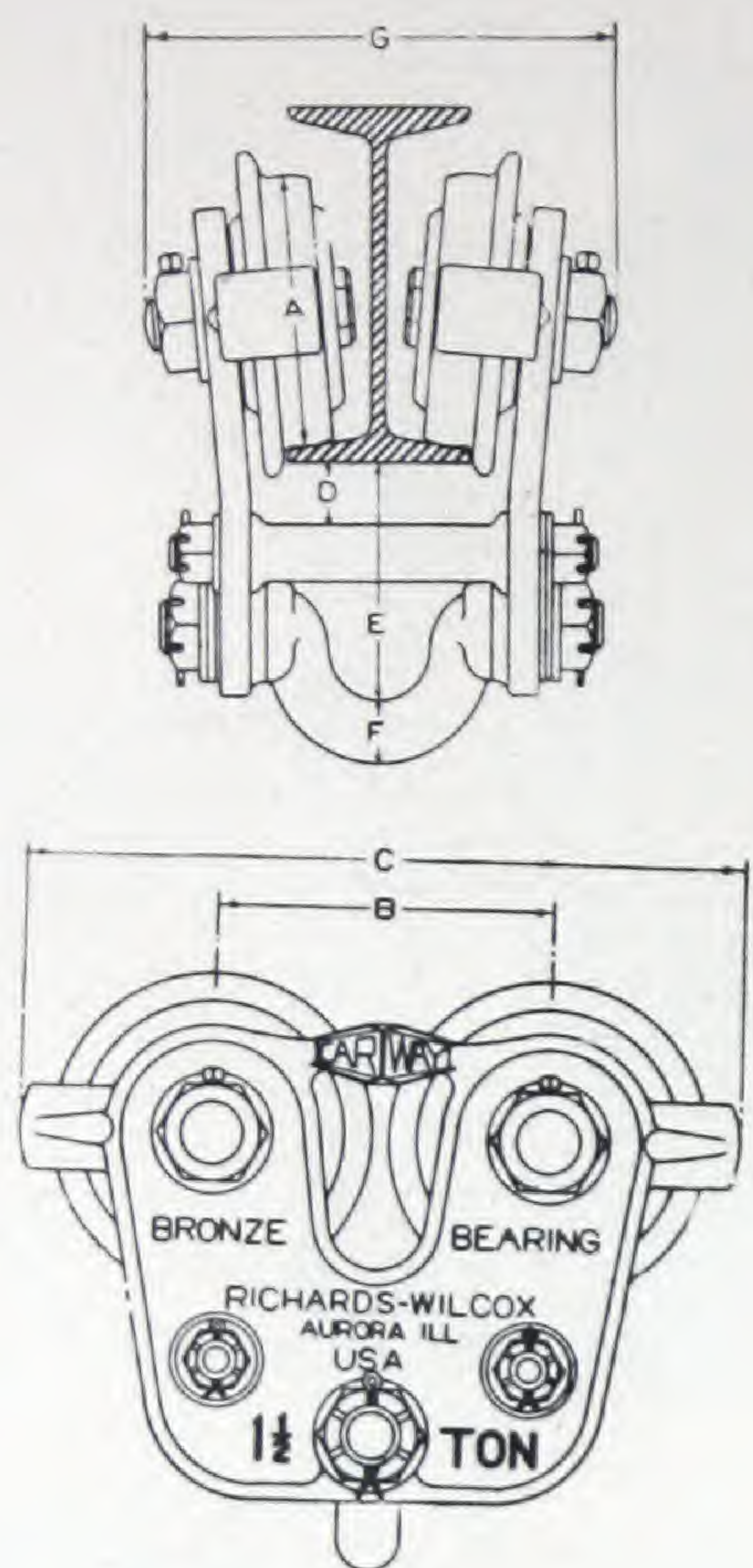
**This dimension applies to trolleys running on smallest of the three beams of each capacity listed in column two. Add $\frac{1}{8}$ inch for each larger size beam.

DISCOUNT.....

For Dimension Diagrams See Opposite Page



R-W NO. 926 PLAIN-BEARING I-BEAM TROLLEYS



277

Made in Five Sizes. Each Trolley Adjustable to Three Sizes of I-Beams

High test malleable iron side plates and yoke. Wheels of hard gray iron with treads crowned to give minimum friction and chilled to give maximum hardness and minimum wear. Short wheel base operates easily on curves. Wheels have bronze bushed bearings operating on hardened steel pins. Spreader rods set loose in oversized holes so that trolley sides can pivot about the load pin, insuring even distribution of load on all four wheels under all conditions. Bumpers on end of frame sides prevent trolleys from damaging wheel flanges when running together.

List Price and Dimension Table

See Dimension Diagrams Above

No and Capacity of Trolley, Tons	*Standard Size of I-Beams, Inches	Width of Wheel-Tread, Inches	Diam. of Wheels on Tread, Inches, A	Wheel Centers, Inches, B	Length Over All, Inches, C	Clearance Below I-Beam, Inches, D	Dist. from Bottom of I-Beam to Yoke, Inches, E	Diameter of Yoke, Inches, F	Width Over All, Inches, **G	Weight, Pounds	List Price, Each
926— $\frac{1}{4}$	4, 5, 6	$\frac{5}{8}$	2 $\frac{1}{8}$	3 $\frac{1}{8}$	8 $\frac{1}{4}$	$\frac{3}{4}$	3	$\frac{1}{8}$	6 $\frac{1}{4}$	22	\$15.00
926— $\frac{1}{2}$	5, 6, 7	$\frac{3}{4}$	3 $\frac{3}{4}$	4 $\frac{1}{8}$	10 $\frac{1}{4}$	1	3 $\frac{1}{2}$	$\frac{1}{8}$	7 $\frac{1}{2}$	38	18.00
926—1	6, 7, 8	$\frac{1}{2}$	4 $\frac{5}{8}$	5 $\frac{3}{8}$	12 $\frac{1}{4}$	1 $\frac{1}{4}$	4	$\frac{1}{8}$	8	62	24.00
926—1 $\frac{1}{2}$	7, 8, 9	1 $\frac{1}{8}$	5 $\frac{1}{2}$	6 $\frac{7}{8}$	14 $\frac{1}{2}$	1 $\frac{3}{4}$	4 $\frac{1}{2}$	1 $\frac{3}{4}$	9 $\frac{1}{2}$	84	30.00
926—2	8, 9, 10	1 $\frac{1}{2}$	6 $\frac{1}{8}$	7 $\frac{1}{8}$	16 $\frac{1}{4}$	1 $\frac{3}{4}$	5	1 $\frac{3}{4}$	10 $\frac{1}{4}$	116	36.00

*Trolleys can be furnished to run on larger size beams at a list price of \$3.00 extra.

**This dimension applies to trolleys running on smallest of the three beams of each capacity listed in column two. Add $\frac{1}{2}$ inch for each larger size beam.

Discount

R-W Single Link Flat Track Fire Door Fixtures

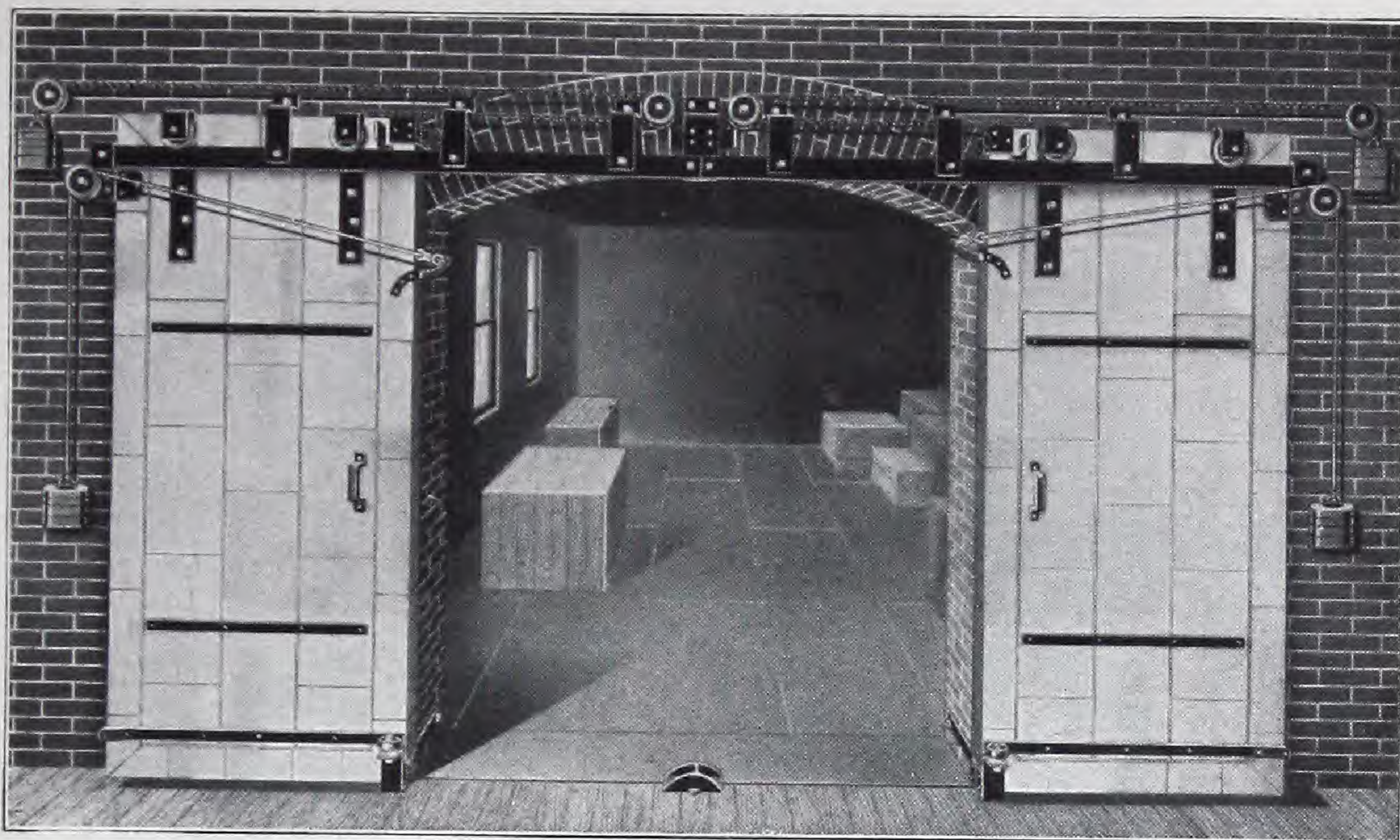
For Pairs of Sliding Doors Level Track Drop Bracket Type.

R-W No. 305-2 For Two-ply (1 3/4 inch) Tin Clad Doors.

R-W No. 305-3 For Three-ply (2 5/8 inch) Tin Clad Doors.

R-W No. 1305 For "FyeR-Wall" Sheet Metal Doors.

(Requires 9" Headroom).



No. 305 Fire Door Fixtures Applied to Tin Clad Fire Doors

The above fixture is operated the same as regular No. 304 illustrated on pages 44-45 except using sliding doors in pairs.

Designed to meet special conditions such as not sufficient wall space on one side to slide a single door and where low headroom will not permit the use of regular No. 204 fixtures.

This type has one fusible link on each door and both are exposed in the opening at all times.

Directions for Ordering.

See page 44 and give all information asked for.

NOTE: This fixture requires 9" of headroom and half the width of opening plus twenty inches wall space on each side of opening.

Detail of parts shown on pages 20-21. See pages 82-85 for R-W Standard Approved and Labeled Tin Clad and R-W "FyeR-Wall" sheet metal doors. Hardware suitable for Saino and Merchant and Evans Doors furnished when required.

List Price for Nos. 305-2, 305-3 and 1305 Fire Door Fixtures.

List price includes hangers, track and fixtures complete for doors when used on one side of wall only. If doors are to be used on both sides of wall, double sets will be required and the price will be doubled. Fixtures packed complete with all bolts and screws for attaching parts to door, heavy cast washers for wall bolts and necessary counter-balance weights. Weights are furnished regularly for openings 8' high. If opening is higher, additional weights are required.

Wall bolts are not included, but will be furnished at moderate price if thickness of wall is given.

Width of Opening with 2 pr. Hangers.	List Price	Weight per Set, Lbs.	Width of Opening with 2 pr. Hangers	List Price	Weight per Set, Lbs.
3 feet	\$43.90	304	6 1/2 feet	\$53.20	400
3 1/2 feet	45.00	309	7 feet	55.15	406
4 feet	46.80	315	7 1/2 feet	55.85	411
4 1/2 feet	47.50	332	8 feet	57.80	457
5 feet	49.45	358	8 1/2 feet	58.50	462
5 1/2 feet	50.15	383	9 feet	60.45	500
6 feet	50.85	389	9 1/2 feet	61.15	505
			10 feet	63.10	511

No. 305-2, 305-3 or No 1305 Automatics only, weight 79 lbs. Per set.....\$13.70

No. 305-2, 305-3 or No. 1305 Fixtures only, less Hangers, Track and Brackets; Binder, Chafe and Guide

Roli Strips, weight 163 lbs. Per set..... 26.60

†No. 204-84 Track only, with brackets for two-ply doors, used with No. 305-2 fixtures, weight 8 lbs. Per ft. 1.15

†No. 204-84 Track only, with brackets for three-ply doors, used with No. 305-3 fixtures, weight 8 lbs. Per ft. 1.15

No. 102-3 x 303 Hangers, used with No. 305-2 or 305-3 Hardware, (page 52), weight 30 lbs. Per pair.... 4.10

No. 1102 x 1303 Hangers with back plates, (page 52), used with No. 1305 Hardware, weight 35 lbs. Per pair 4.10

†Length of each track equals width of opening plus 8 inches.

Discount.....

R-W Single Link Flat Track Fire Door Fixtures

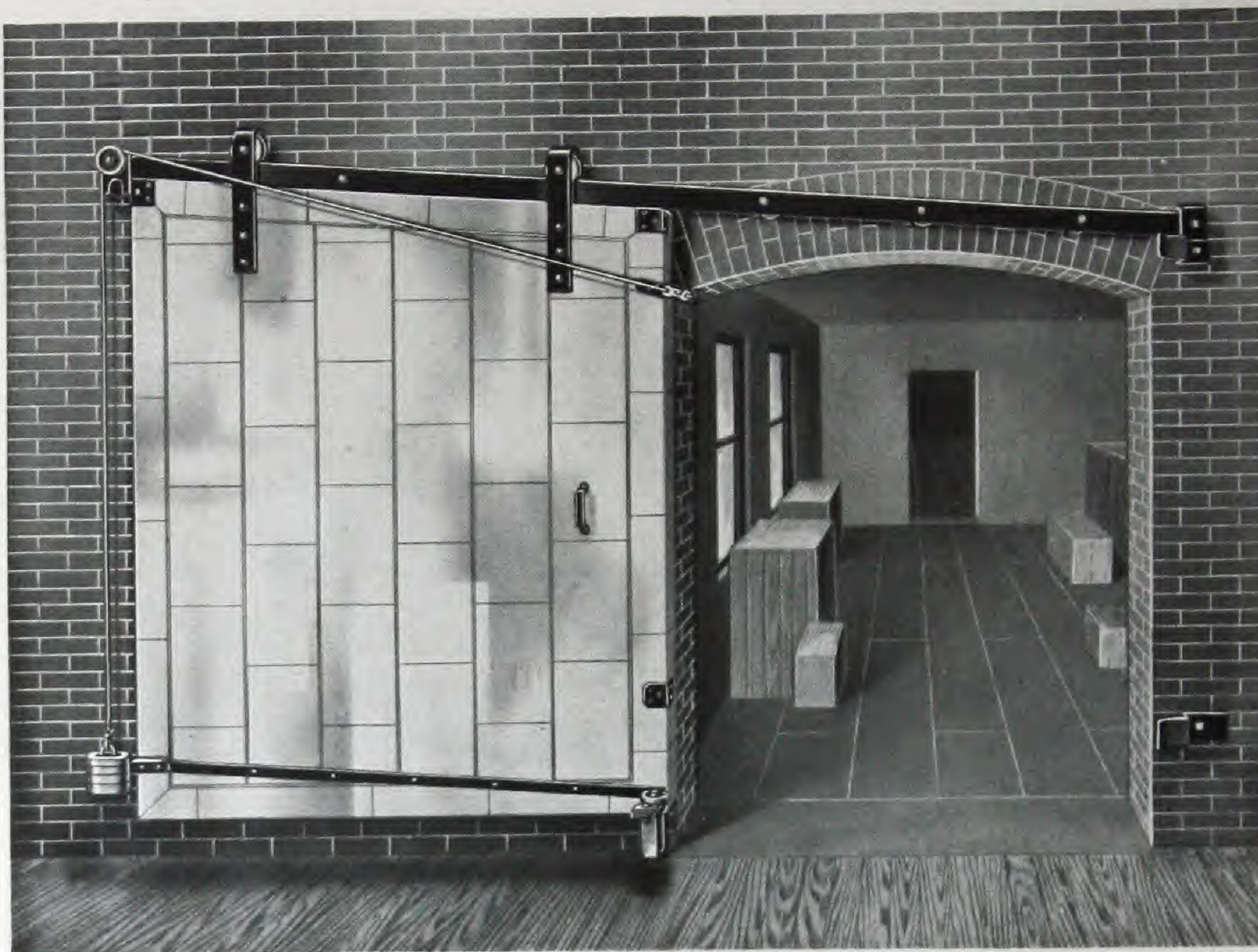
For Single Sliding Doors, Incline Track.

R-W No. 104-2, for Two-ply (1 3/4 inch) Tin Clad Doors.

R-W No. 104-3, for Three-ply (2 5/8 inches) Tin Clad Doors.

New England Style

This fixture is designed to meet the demand for a less expensive outfit than the approved labeled fixtures and is used in territory where local boards do not require labeled hardware. The features of this fixture are that the link is exposed from both sides of opening, top binder, back stop and rope pulley are attached to track, saving expense of bolts and drilling wall. This construction prevents loosening of bolts, as shock is distributed over all track bolts.



No. 104 Fire Door Fixtures Applied to Tin Clad Fire Door

List Price for Nos. 104-2 and 104-3 Fire Door Fixtures.

List price includes hangers, track and fixtures complete for doors when used on one side of wall only. If doors are to be used on both sides of wall, double sets will be required and the price will be doubled. Fixtures packed complete with all bolts and screws for attaching parts to door, heavy cast washers for wall bolts and necessary counter-balance weights. Weights are furnished regularly for openings 8' high. If opening is higher, additional weights are required.

Wall bolts are not included, but will be furnished at moderate price if thickness of wall is given.

Width of Opening with 1 pr. Hangers	List Price	Weight Per Set, Lbs.	*Width of Opening with 1 1/2 pr. Hangers	List Price	Weight Per Set, Lbs.
3 feet	\$14.70	150	6 1/2 feet	\$19.10	217
3 1/2 feet	15.05	155	7 feet	19.40	223
4 feet	15.40	161	7 1/2 feet	19.70	232
4 1/2 feet	15.70	168	8 feet	20.10	243
5 feet	16.05	176	8 1/2 feet	20.40	253
5 1/2 feet	16.40	187	9 feet	20.70	261
6 feet	16.70	193	9 1/2 feet	21.10	267
			10 feet	21.40	277

No. 104-2 or 104-3 Automatics only, weight 25 lbs. Per set\$3.50

No. 104-2 or 104-3 Fixtures only, less Hangers, Track and Brackets; Binder, Chafe and Guide Roll

Strips, weight 59 lbs. Per set..... 8.00

†No. 104-84 Track only, with brackets, weight 4 1/2 lbs. Per foot38

No. 104-2 Hangers only, (page 52), weight 30 lbs. Per pair 3.50

No. 104-3 Hangers only, (page 52), weight 30 lbs. Per pair 3.50

*For openings (not doors) over six feet wide Underwriters require three hangers.

†Length of track equals twice width of opening plus 21 inches.

Discount.....

Directions For Ordering.

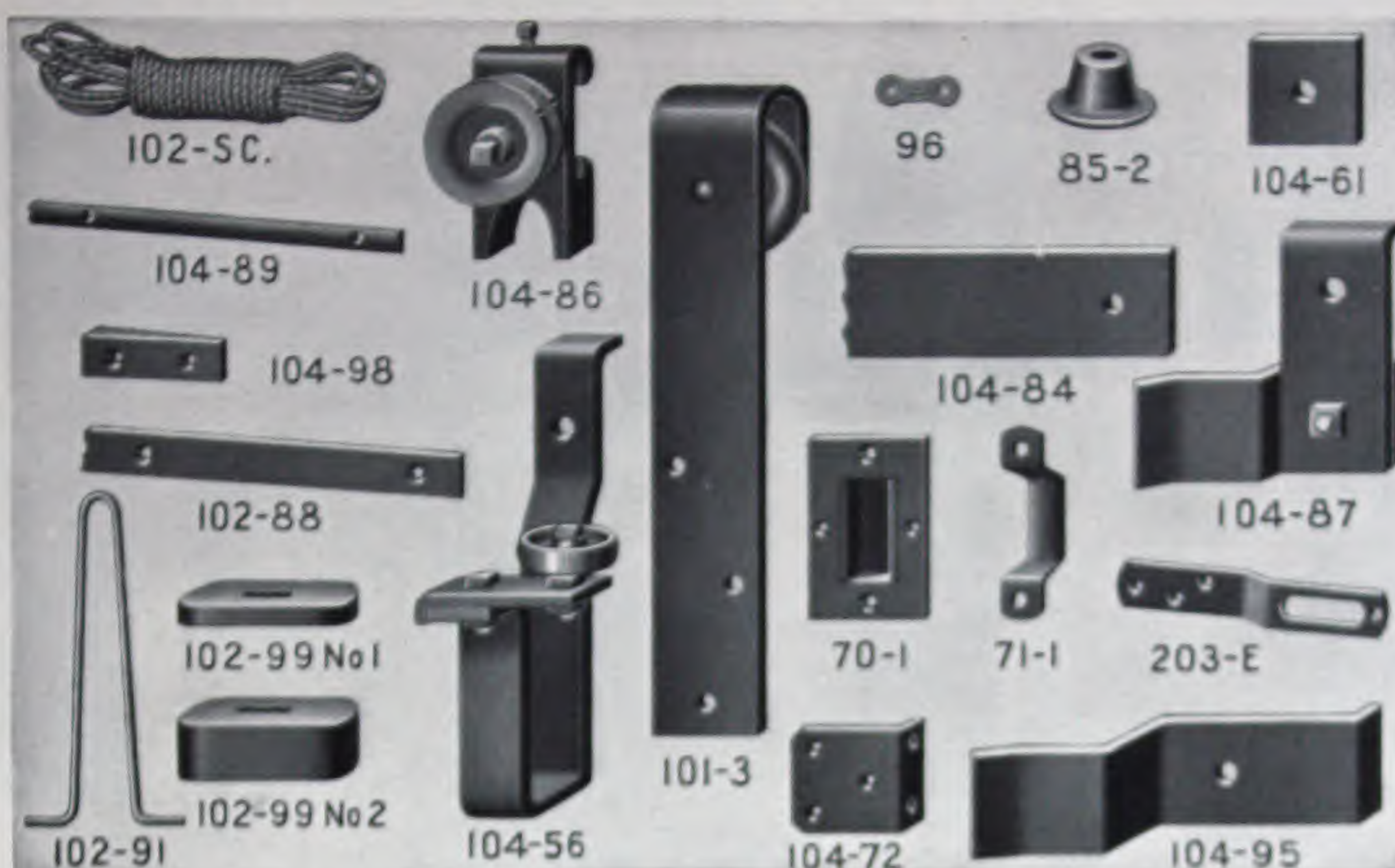
See page 16 and give all information asked for.

NOTE: Square top opening requires 14 inches of head room at edge of opening toward which the door slides in closing, plus 3/4-inch more for each foot of track.

Arched top opening requires 14 inches headroom above the top of arch plus 3/4-inch more for each foot the track extends beyond the center of opening.

Fixtures require 11 inches of side wall room on side toward which door slides in closing and the width of opening plus 22 inches on opposite side.

Details of parts shown on page 51. See pages 82-85 for R-W Standard Approved and Labeled Tin Clad Fire Doors.



Packing List for R-W No. 104-2 and No. 104-3 Fire Door Fixtures.

104-2	104-3	DESCRIPTION	List Price
1	1	No. 56 Guide Roller, each.....	\$1.50
1	1	No. 70-1 Flush Pull, each.....	.20
1	1	No. 71-1 Bow Handle, each.....	.10
1	1	No. 85-2 Track Brackets, (See table below), each.....	.16
1	1 Pair	No. 101-3 Hangers, Openings over 6' wide require 1 1/2 pr. Per pair.....	2.50
1	1	No. 102-SC Sash Cord, Length as required, Per foot.....	.05
1 Pe.	1 Pe.	No. 102-88 Guide Roll Strips, Length equals width of opening plus 4", each.....	.30
1	1	No. 102-91 Weight Holder, each.....	.15
1	1	No. 102-99 No. 1 Lightweight, (According to size of opening), each.....	.35
1	1	No. 102-99 No. 2 Heavyweights, (According to size of opening), each.....	.75
1 Pair	1	No. 104-2 Hangers, Openings over 6' wide require 1 1/2 pr. Per pair.....	2.50
3	3	No. 104-72 Bumper Shoes, each.....	.10
1 Run	1 Run	No. 104-84 Track Length equals twice width of opening plus 21", per foot.....	.38
1	1	No. 104-86 Back Bumper and Rope Pulley, complete.....	1.50
1	1	No. 104-87-2 Front Bumper and Binder, complete.....	1.00
1	1	No. 104-87-3 Front Bumper and Binder, complete.....	1.00
1 Pe.	1 Pe.	No. 104-89 Chafe Strips, Length equals width of opening less 4", each.....	.40
1	1	No. 104-95-2 Binder, each.....	.80
1	1	No. 104-95-3 Binder, each.....	.80
1	1	No. 104-98 Wedge, each.....	.10
1	1	No. 203-E Link Bracket, with No. 96 Fusible Link attached.....	.55
1	1	No. 366 3/4" Steel Washers, (See table below).....	.08
1	1	Package Screws and Bolts.....	

Discount.....

Table of No. 366 Washers and No. 85-2 Track Brackets for Above Fixtures.

Width of Opening	Number of Brackets	Number of Washers
3' 0" to 4' 6"	5	7
4' 7" to 5' 0"	6	8
5' 1" to 7' 6"	7	9
7' 7" to 8' 6"	9	11
8' 7" to 11' 0"	10	12
	Fixtures only require.....	2

Wall Bolt List for No. 104-2 and No. 104-3 Fire Door Fixtures

Wall bolts furnished at prevailing market prices when customer requests them.

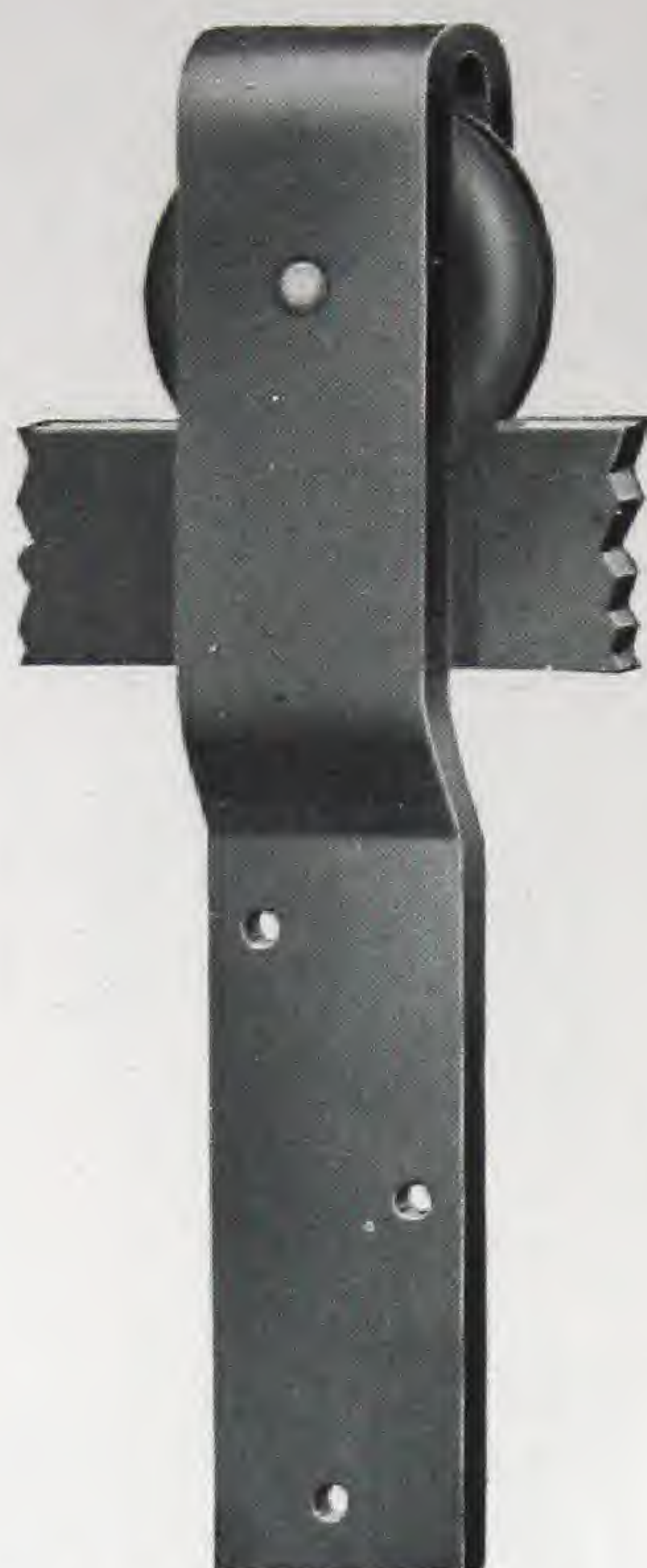
Fixture bolts are used to fasten.....	Opening 3' 0" to 4' 6" Wide	Opening 4' 7" to 5' 0" Wide	Opening 5' 1" to 7' 6" Wide	Opening 7' 7" to 8' 6" Wide	Opening 8' 7" to 11' 0" Wide	Length of Bolts for Sets Installed.	
						On One Side of Wall	On Both Sides of Wall
Binders.....	1	1	1	1	1	Wall thickness plus 2"	Wall thickness plus 2"
Guide Rollers.....	1	1	1	1	1	Wall thickness plus 1"	Wall thickness minus 3/4"
Center Track Brackets.....	4	5	6	8	9	Wall thickness plus 4"	Wall thickness plus 5"
End Track Brackets.....	1	1	1	1	1	Wall thickness plus 4"	Wall thickness plus 4"
Total.....	7	8	9	11	12		



R-W Fire Door Hangers



No. 102-3 Hanger used with Nos. 102-3, 201-3, 204-3, 303-3, 304-3, 304-2, 302-3, 305-2 and 305-3 fixtures.



No. 102-2 Hanger used with Nos. 102-2, 201-2, 204-2, 303-2 and 302-2 fixtures.



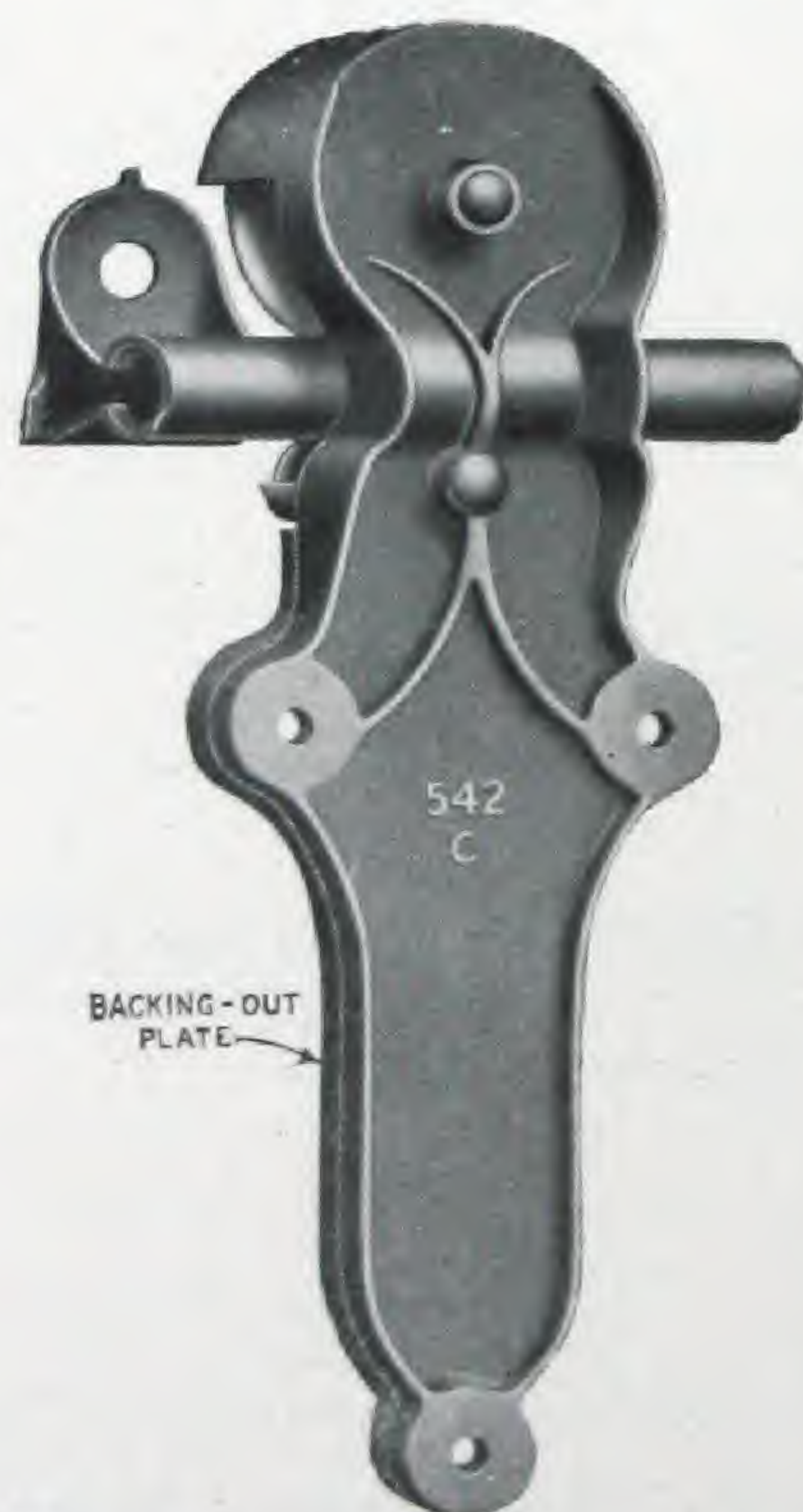
No. 202 Adjustable Flat Track Hanger used where adjustable feature is desired.



No. 1102 Hanger with back plate, used with Nos. 1102, 1201, 1204, 1303, 1304, 1302 and 1305 fixtures.

The hangers illustrated here are included in the list of Fire Door Hardware examined under standard requirements of the National Board of Fire Underwriters, after exhaustive investigation by the Under-

writers' Laboratories (Inc.), and approved for use. Wheels are malleable iron. Frames are steel or malleable iron and of heavy construction. Bearings, steel rollers. Finish japan.



No. 542-C Hangers

Steel Frame.

Malleable Iron Frame.

No. 542-C Hanger. Used with Nos. 654-3, 646-3, 604-3 and 641-3 fixtures.

No. 542-C Hanger with back plate, used with Nos. 645-2, 646-2, 604-2 and 641-2 fixtures.



No. 642-5 Adjustable Round Track Hanger, used where adjustable feature is desired.



No. 742 Hanger with back plate, used with Nos. 1645, 1646, 1604 and 1641 fixtures.

LIST PRICE

No. 102-3 Hangers. Shipping wt. 30 lbs. Per pr. \$4.10
 No. 102-2 Hangers. Shipping wt. 30 lbs. Per pr. 4.10
 No. 202 Hangers. Shipping wt. 36 lbs. Per pr. 7.00
 No. 1102 Hangers. Shipping wt. 35 lbs. Per pr. 4.10
 No. 542-C Hangers. Shipping wt. 22 lbs. Per pr. 4.20

No. 542-C Hangers, with backplate. Shipping wt. 25½ lbs. Per pair. 4.20
 No. 642-5 Hangers. Shipping wt. 32 lbs. Per pr. 8.50
 No. 742 Hangers with back plate. Shipping wt. 25½ lbs. Per pair. 4.20

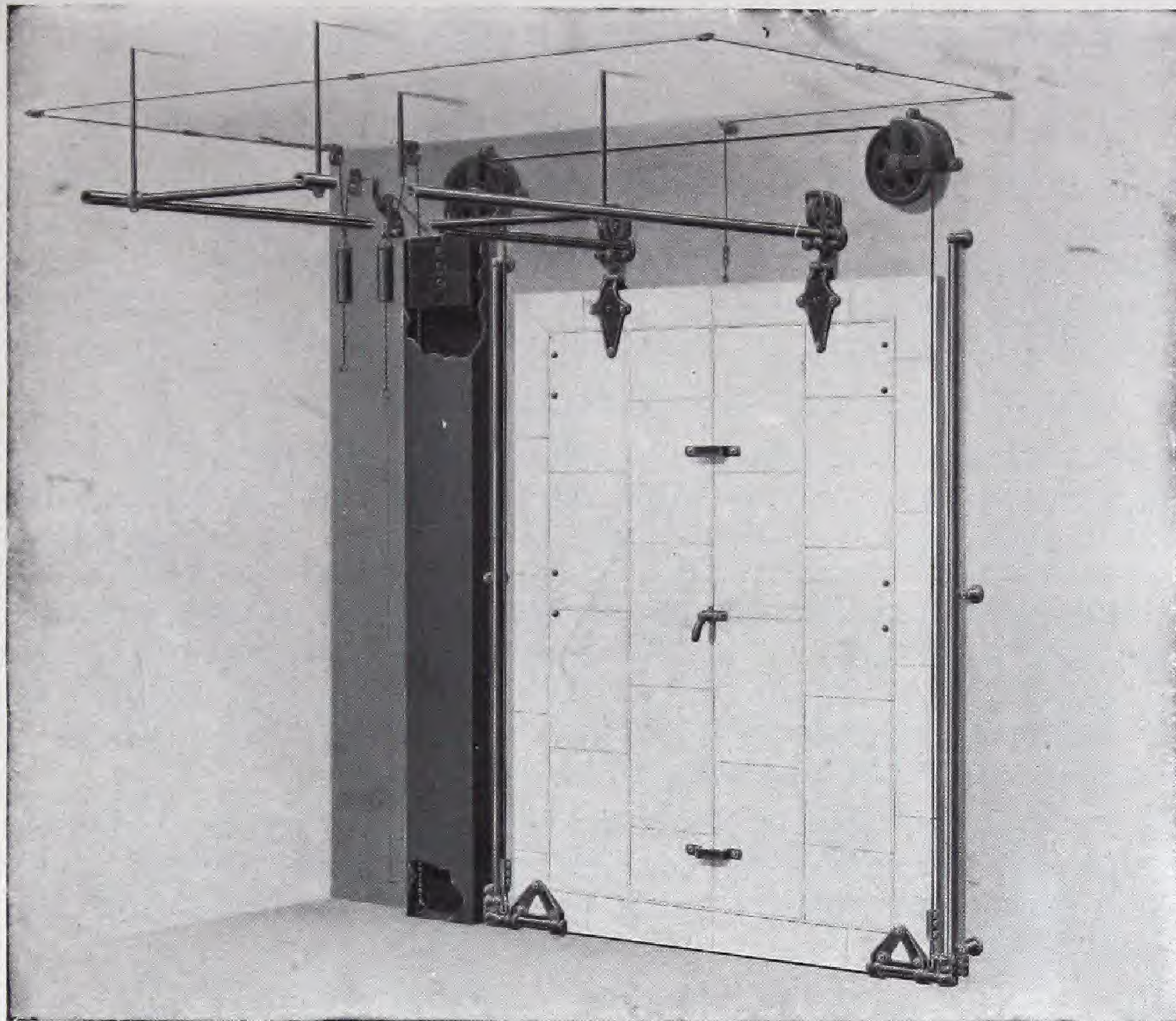
Discount.....

R-W Horizontal Turnover Fire Door Hardware

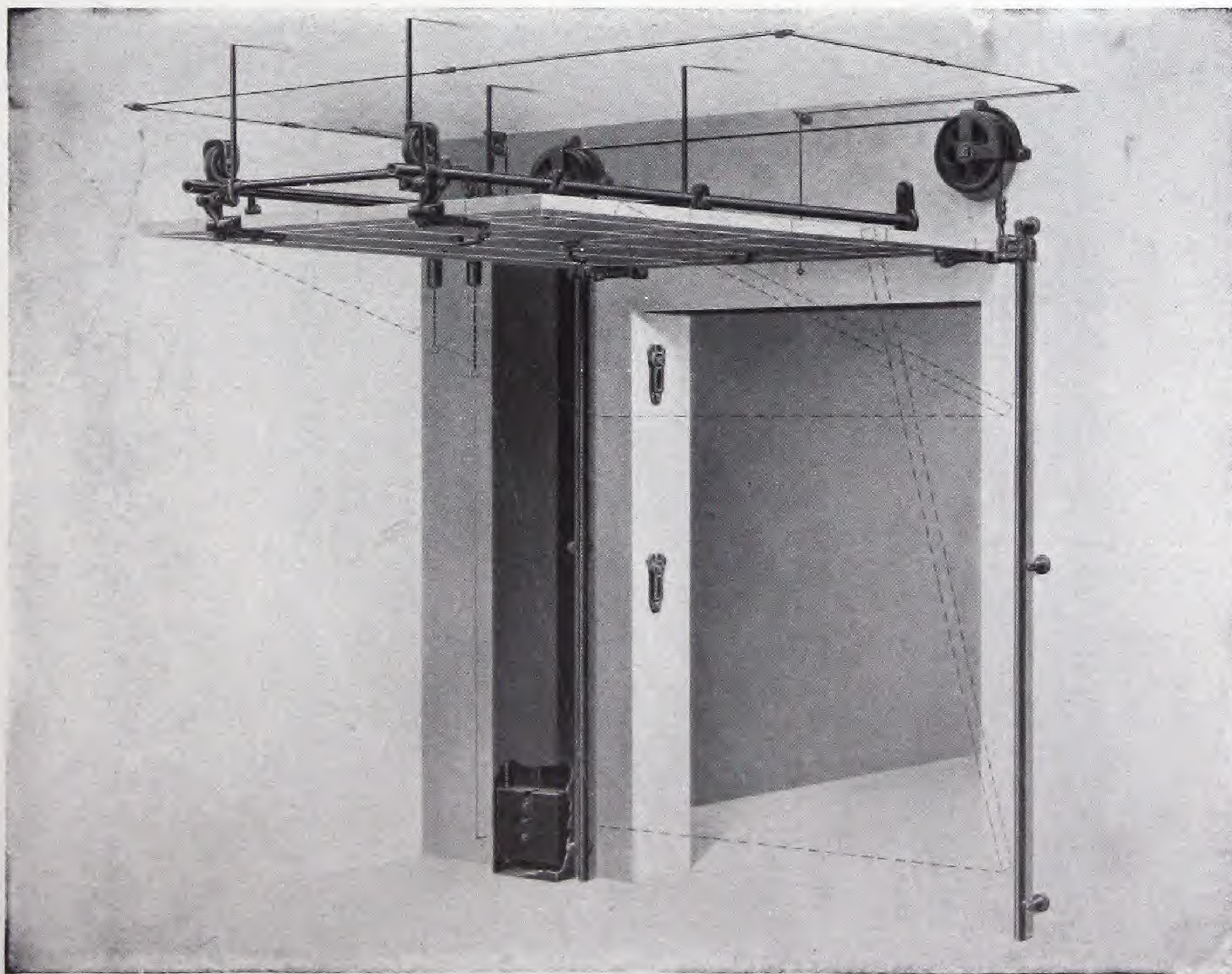
R-W No. 649-2 For Two-ply ($1\frac{3}{4}$ ") Tin Clad Doors

R-W No. 649-3 For Three-ply ($2\frac{5}{8}$ ") Tin Clad Doors

Can be Furnished For "FyeR-Wall" Sheet Metal Doors When Required



No. 649 Fire Door Fixtures Applied to Tin Clad Fire Door
Door in Closed Position



No. 649 Fire Door Fixtures Applied to Tin Clad Fire Door
Door in Open Position



R-W Horizontal Turnover Fire Door Fixtures (Continued)

The R-W Horizontal Turnover Door is the most practical device on the market. It is applicable to openings of all kinds, but is especially adapted for use where ceilings prevent the use of a vertical door, where obstructions at the side of the opening prohibit the use of the ordinary sliding door and is suitable for openings on freight elevator shafts. When this door is in open position, it is entirely out of the way. It is equipped with our automatic closing device.

LIST PRICE

The following list price includes hangers, track and fixtures, including automatic closing device. These prices are based on openings having sufficient head room and side wall space, so it is not necessary to compound counter-balance weights (see details, page 58). Prices and clearances for hardware with compounded counterweights given on page 55. Fixtures packed complete with all bolts and screws for attaching parts to door and heavy cast washers for wall bolts.

Weight box, as shown, is not included in prices.

Wall bolts are not included, but will be furnished at moderate price if thickness of wall is given. Fixtures for openings up to 8 feet high, require for vertical tracks, eight $\frac{3}{4}$ -inch diameter machine bolts; length equals thickness of wall plus $4\frac{1}{2}$ inches. For openings over 8 feet high, 10 machine bolts are required for vertical tracks. Fixtures mounted as details "A" or "B" (see page 58), require 7 additional machine bolts $\frac{3}{4}$ -inch diameter; length equals thickness of wall plus $2\frac{1}{2}$ inches. Fixtures mounted as details "C" or "D" (see page 58), require 9 additional machine bolts; and fixtures mounted according to details "F" or "G" (see page 58), require 8 additional machine bolts. No. 649-2123 Latches are generally furnished for fire doors. Eight $\frac{1}{2}$ -inch x 4-inch expansion bolts are required for attaching keepers to walls.

Counterweights are not included in price list of sets but are furnished in amounts required at prices listed on page 57. Counterweights equal to 60% of the weight of the door are required on simple counterweighting, and weights equal to 120% of the weight of the door are required for compounding counterweights.

OVERHEAD CLEARANCES AND LIST PRICES—SIMPLE COUNTERWEIGHTS

Size of Opening (feet)	Space Required Above Opening, (Not Door)								List Price Detail A-B	List Price Detail C-D
	Weight as Detail A (Page 58)		Weight as Detail B (Page 58)		Weight as Detail C (Page 58)		Weight as Detail D (Page 58)			
	2-ply door (inches)	3-ply door (inches)	2-ply door (inches)	3-ply door (inches)	2-ply door (inches)	3-ply door (inches)	2-ply door (inches)	3-ply (inches) door		
4x7	26½	30	19½	19½	27	29	25½	26½	\$53.50	\$58.00
5x7	29½	34	19½	19½	28	30½	26	27½		
6x7	32	37	19½	19½	29	32½	27	28		
7x7	34½	40½	19½	19½	30	34	27½	29		
8x7	37½	44	19½	19½	31	35½	28	30		
9x7	40	47	19½	19½	32	37	29	31	54.50	59.00
10x7	42½	50½	19½	19½	33	39	29½	32½		
4x8	29	33	19½	19½	28	30	26	27		
5x8	31½	36½	19½	19½	29	32	27	28½		
6x8	34½	40½	19½	19½	30	34	27½	29½		
7x8	37½	44	19½	19½	31	36	28	31	56.50	61.00
8x8	40½	47½	19½	19½	32	38	29	32½		
9x8	43½	51½	19½	19½	33	40	29½	34		
10x8	46	55	19½	19½	34	42	30	35		
4x9	30½	35	19½	19½	28½	31½	26½	28		
5x9	33½	39	19½	19½	30	33	27½	29	57.50	62.00
6x9	37	43½	19½	19½	31½	35	28½	31		
7x9	40½	47½	19½	19½	33	38	29½	33		
8x9	44	52	19½	19½	34½	41	30½	35		
9x9	47	56	19½	19½	36	42	31½	36		
10x9	50	60½	19½	19½	37½	43½	32½	37	57.50	62.00
4x10	32	37	19½	19½	29	32½	27	28		
5x10	35½	41½	19½	19½	30½	34½	27½	29½		
6x10	39	46	19½	19½	32	37	28½	31		
7x10	43	51	19½	19½	34	39	29	32½		
8x10	47	56	19½	19½	35½	42	30	35	57.50	62.00
9x10	50½	60½	19½	19½	37	44	31	37		
10x10	54	65	19½	19½	39	46	32	38½		

NOTE—The average shipping weight of a set of fixtures, less weights, equals about 275 lbs. Directions for ordering shown on next page.

Discount.....

R-W No. 649

Horizontal Turnover Fire Door Fixtures (Con.)

OVERHEAD CLEARANCES AND LIST PRICE—COMPOUNDED COUNTERWEIGHTS

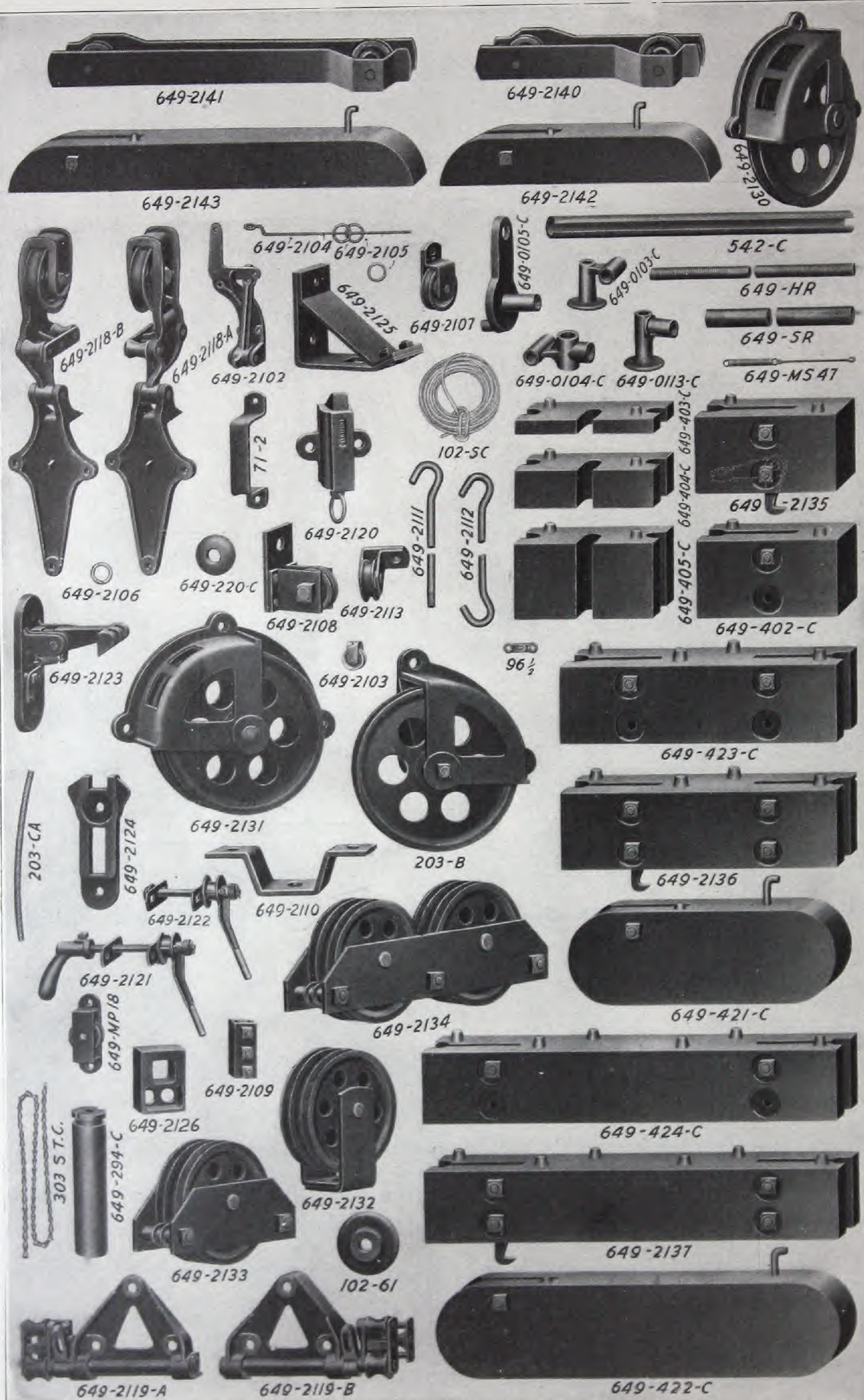
Size of Opening (feet)	Space required above opening (not door)				List Price
	Weights as Detail F (page 58)		Weights as Detail G (page 58)		
	2-ply Door (inches)	3-ply Door (inches)	2-ply Door (inches)	3-ply Door (inches)	
4 x 7	19½	19½	19½	19½	\$57.50
5 x 7	19½	19½	19½	19½	
6 x 7	19½	22	19½	19½	
7 x 7	19½	30	19½	19½	
8 x 7	19½	36	19½	19½	
9 x 7	24½	43	19½	19½	
10 x 7	29	50	19½	19½	58.50
4 x 8	19½	19½	19½	19½	
5 x 8	19½	19½	19½	19½	
6 x 8	19½	23	19½	19½	
7 x 8	19½	31	19½	19½	
8 x 8	19½	37	19½	19½	
9 x 8	25½	46	19½	19½	60.50
10 x 8	31	54	19½	19½	
4 x 9	19½	19½	19½	19½	
5 x 9	19½	19½	19½	19½	
6 x 9	19½	25	19½	19½	
7 x 9	19½	31	19½	19½	
8 x 9	19½	39½	19½	19½	61.50
9 x 9	25	48	19½	19½	
10 x 9	31	57	19½	19½	
4 x 10	19½	19½	19½	19½	
5 x 10	19½	19½	19½	19½	
6 x 10	19½	23	19½	19½	
7 x 10	19½	32½	19½	19½	61.50
8 x 10	19½	42	19½	19½	
9 x 10	25	51½	19½	19½	
10 x 10	32½	61	19½	19½	

NOTE—The average shipping weight of a set of fixtures, less weights, equals about 275 lbs. Discount.....

Directions for Ordering.—State width and height of opening (mention width first), thickness of doors, lap of doors at side and top (should be 4 in.), available wall space at both sides and above opening; if doors are located in outside walls or partition walls, also if locks are to be operated from one side or both sides of door. State if hanger rods for horizontal track are to be attached to roof, ceiling or beams, giving distance from top of opening to supporting members and show location of joists or beams if hanger rod is to be attached to beams. If to be attached to roof, describe same, stating thickness and material from which it is built. If to be attached to concrete floors above, state thickness of same.

NOTE—See page 58 for different methods of counter-weighting and minimum side wall clearance.

& HARDWARE



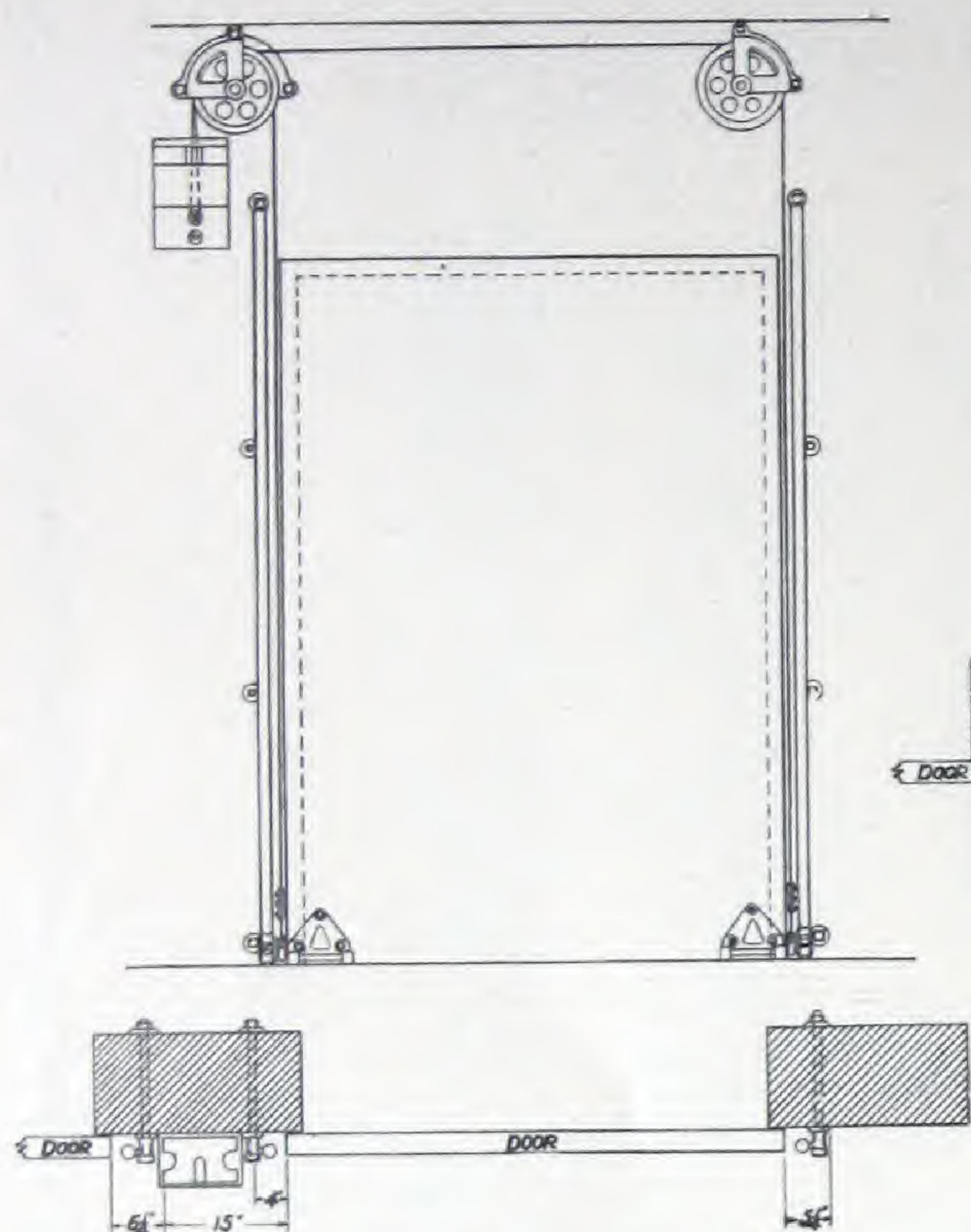
List Price

Detail of No. 649 Parts for Horizontal Sliding Fire Door Fixtures, Illustrated on Opposite Page

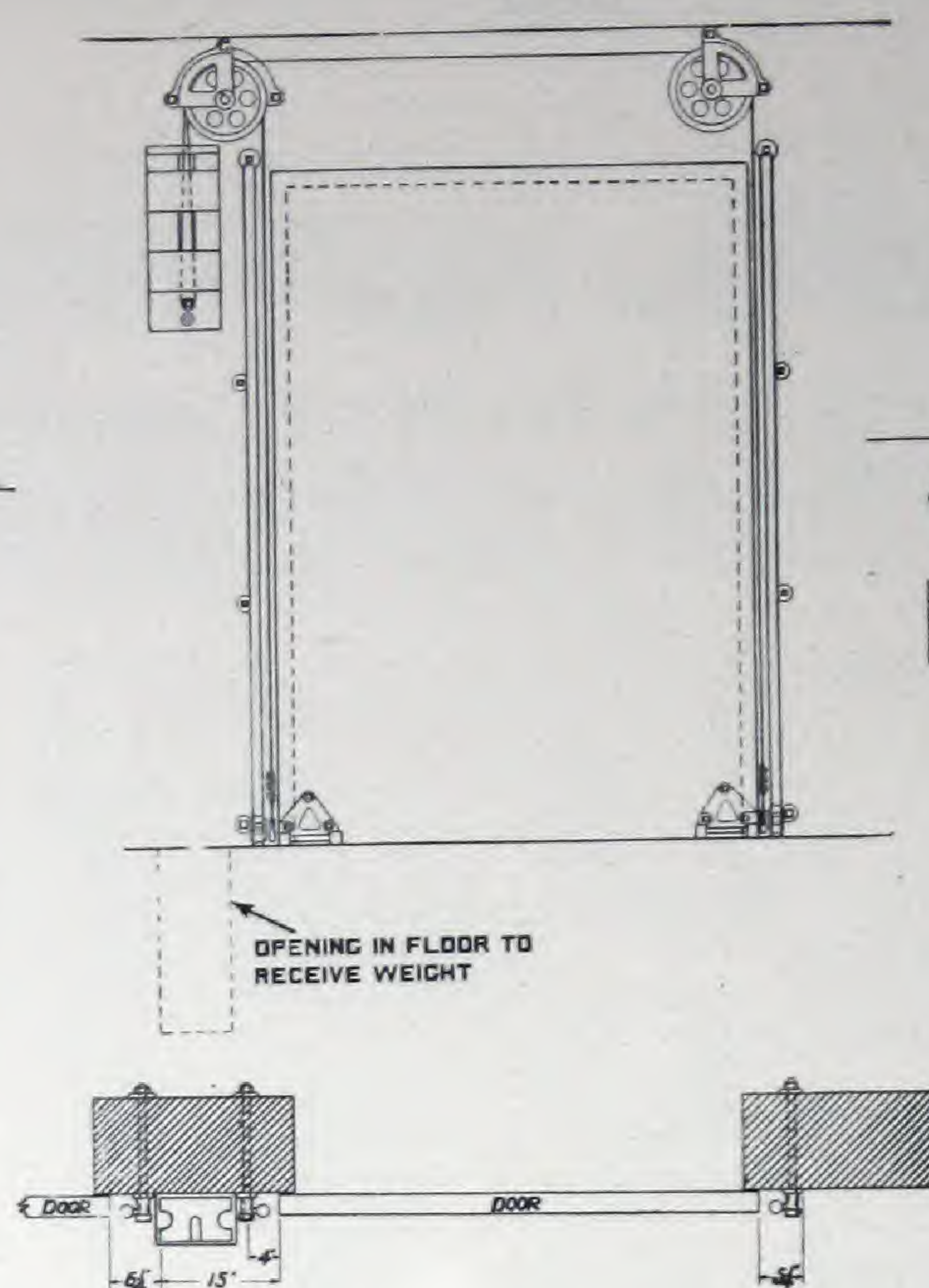
No.	Description	Wt. Lbs.	List Price
71-2	Steel Handle, each	$\frac{3}{4}$	\$.15
96 $\frac{1}{2}$	Fusible Link, each	$\frac{1}{8}$	.20
102-61	Cast Washer (for wall bolts on fire doors), each.....	1 $\frac{1}{2}$	.15
102-SC	No. 7 Sash Cord, per foot.....	...	.05
203-CA	$\frac{3}{8}$ -inch Steel Cable, per foot.....	...	.14
203-B	Single Cable Pulley, each	17	2.50
303-St. C	No. 2 Steel Chain, per foot.....	...	.10
542-C	Track Steel for Horizontal Track, per foot.....	1 $\frac{1}{2}$	.19
542-C	Track Steel for Vertical Track, per foot.....	1 $\frac{1}{2}$	.19
649-2102	Main Keeper, each	2 $\frac{1}{4}$	1.10
649-2103	Ceiling Pulley (Old No. MW-4), each.....	$\frac{1}{8}$	.20
649-2104	Needle, each	$\frac{1}{8}$	.16
649-2105	Chain Ring, each	$\frac{1}{8}$	.06
649-2106	Weight Trip Ring, each.....	$\frac{1}{8}$	.08
649-2107	Side Chain Pulley, each.....	1	.50
649-2108	Cable Bracket, each	2	.60
649-2109	Cable Clamp, each	$\frac{3}{4}$	.60
649-2110	Hanger Rod Bracket, each.....	2 $\frac{1}{2}$	.35
649-2111	Weight Hook for single set of weights, each.....	1	.80
649-2112	Weight Hook for double set of weights, each.....	1	.80
649-2113	Ceiling Chain Pulley, each	1 $\frac{1}{2}$	.50
649-2118A	Top Hanger for 2 $\frac{1}{2}$ -inch Doors (right and left), each.....	10	2.60
649-2118B	Top Hanger for 1 $\frac{3}{4}$ -inch Doors (right and left), each.....	9 $\frac{1}{2}$	2.60
649-2119A	Bottom Hanger for 2 $\frac{1}{2}$ -inch Doors (right and left), each.....	8	1.80
649-2119B	Bottom Hanger for 1 $\frac{3}{4}$ -inch Doors (right and left), each.....	7 $\frac{1}{2}$	1.80
649-2120	Door Bolt (for warehouse doors only), each.....	3 $\frac{1}{4}$	1.30
649-2121	Latch Handle (for both sides of door), each.....	2	.90
649-2122	Latch Handle (for one side of door), each.....	1 $\frac{1}{2}$	.80
649-2123	Four Point Latch, less keepers (for fire doors only), each.....	35	6.00
649-2124	Keeper for Four Point Latch (4 pieces to set, used with 649-2123 only), per set	2 $\frac{3}{4}$	.50
649-2125	Angle Keeper for No. 2120 Bolt (to attach to face of wall. Made in four sizes, for 1 $\frac{1}{4}$ -in., 2-in., 2 $\frac{1}{4}$ -in. and 2 $\frac{1}{2}$ -in doors), each.....	5	.80
649-2126	Keeper for No. 2120 Bolt (to attach to bottom of lintel), each.....	2 $\frac{1}{4}$	.40
649-2130	Single Cable Pulley (used only with weights mounted as detail C), ea.....	18	2.50
649-2131	Double Cable Pulley, each	24	3.25
649-2132	Pulley for single compounded weight, each.....	15	2.50
649-2133	Pulley for double compounded weight, each.....	18	3.00
649-2134	Pulley for triple compounded weight, each.....	34	7.00
649-2135	Main 50-pound weight with trip, each.....	50	4.50
649-2136	Main 100-pound weight with trip, each.....	100	8.50
649-2137	Main 150-pound weight with trip, each.....	150	12.50
649-2140	Weight holder for double weights, each.....	9	1.35
649-2141	Weight holder for triple weights, each.....	13	1.55
649-2142	Drop-Off 50-pound weight, each.....	50	4.50
649-2143	Drop-Off 75-pound weight, each	75	7.00
649-220C	Cast Washer (for wall bolts on warehouse doors), each.....	$\frac{3}{4}$	.10
649-294C	Trip Weight, each	8 $\frac{1}{4}$	.70
649-402C	Main 50-pound weight, each.....	50	4.00
649-403C	Auxiliary 10 pound weight, each.....	10	.80
649-404C	Auxiliary 25 pound weight, each.....	25	2.00
649-405C	Auxiliary 50 pound weight, each.....	50	4.00
649-421C	Drop-off 100 pound wight, each.....	100	8.50
649-422C	Drop-off 150 pound weight, each.....	150	13.00
649-423C	Main 100-pound weight, each.....	100	8.00
649-424C	Main 150 pound weight, each.....	150	12.00
649-0103C	Center Bracket for Vertical Track, each.....	1	.18
649-0104C	Center Bracket for Horizontal Track, each.....	1	.28
649-0105C	End Brackt for Horizontal Track, each.....	1 $\frac{1}{2}$	.24
649-0113C	Top Bracket for Vertical Track, each.....	1	.50
649-HR	Hanger Rod, $\frac{3}{4}$ -inch Round, per foot.....	1 $\frac{1}{2}$	.18
649-SR	Spreader Rod, $\frac{3}{4}$ -inch Round, per foot.....	1	.22
649-MP18	Side Pulley (old No. M-11), each.....	$\frac{3}{4}$	.20
649-MS47	Latch Spring (old No. M-10), each.....	1/6	.14
649-MW15	No. 20 Bright Wire, per pound.....	...	.10

NOTE—Always specify by number.

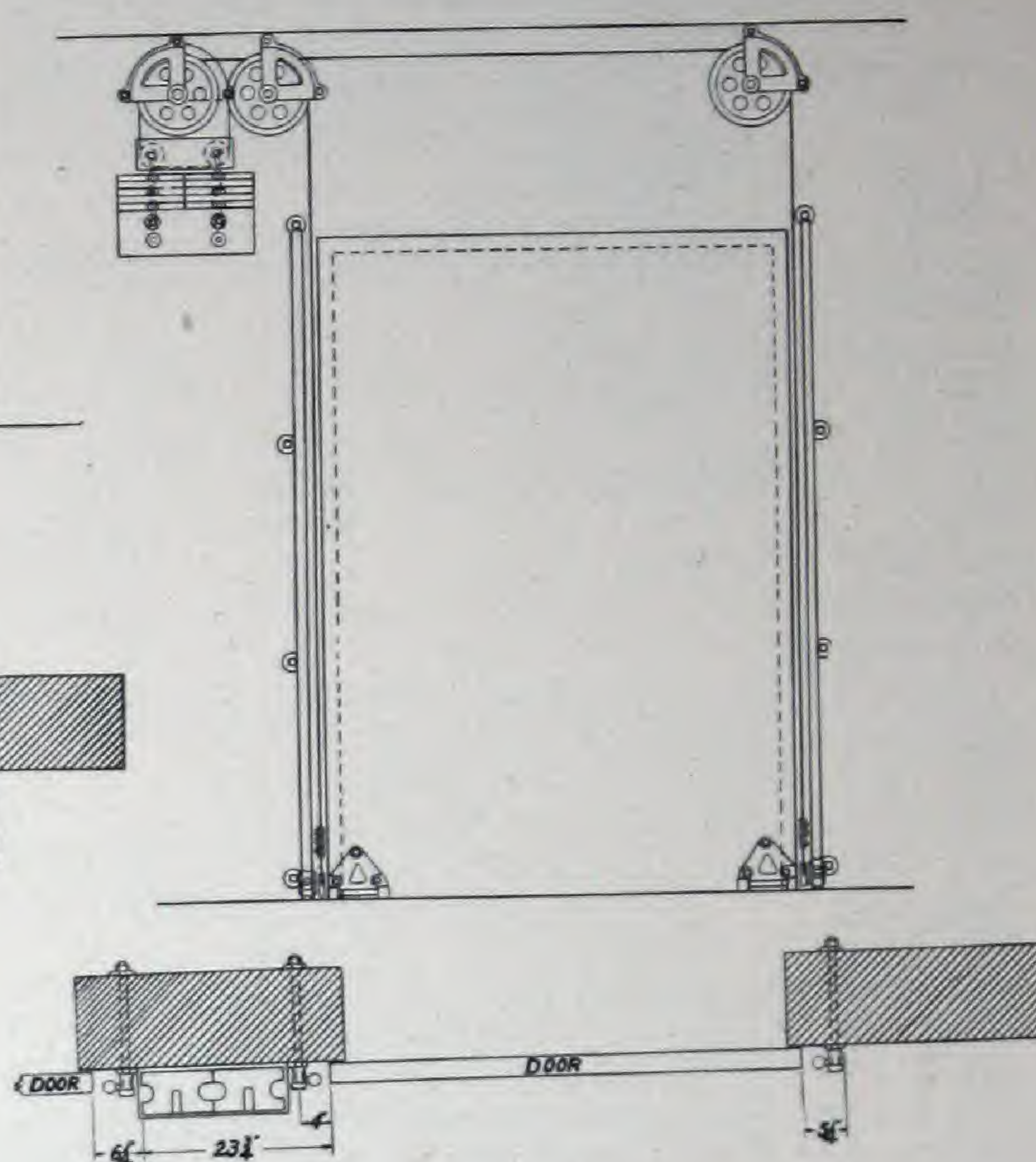
Discount.....



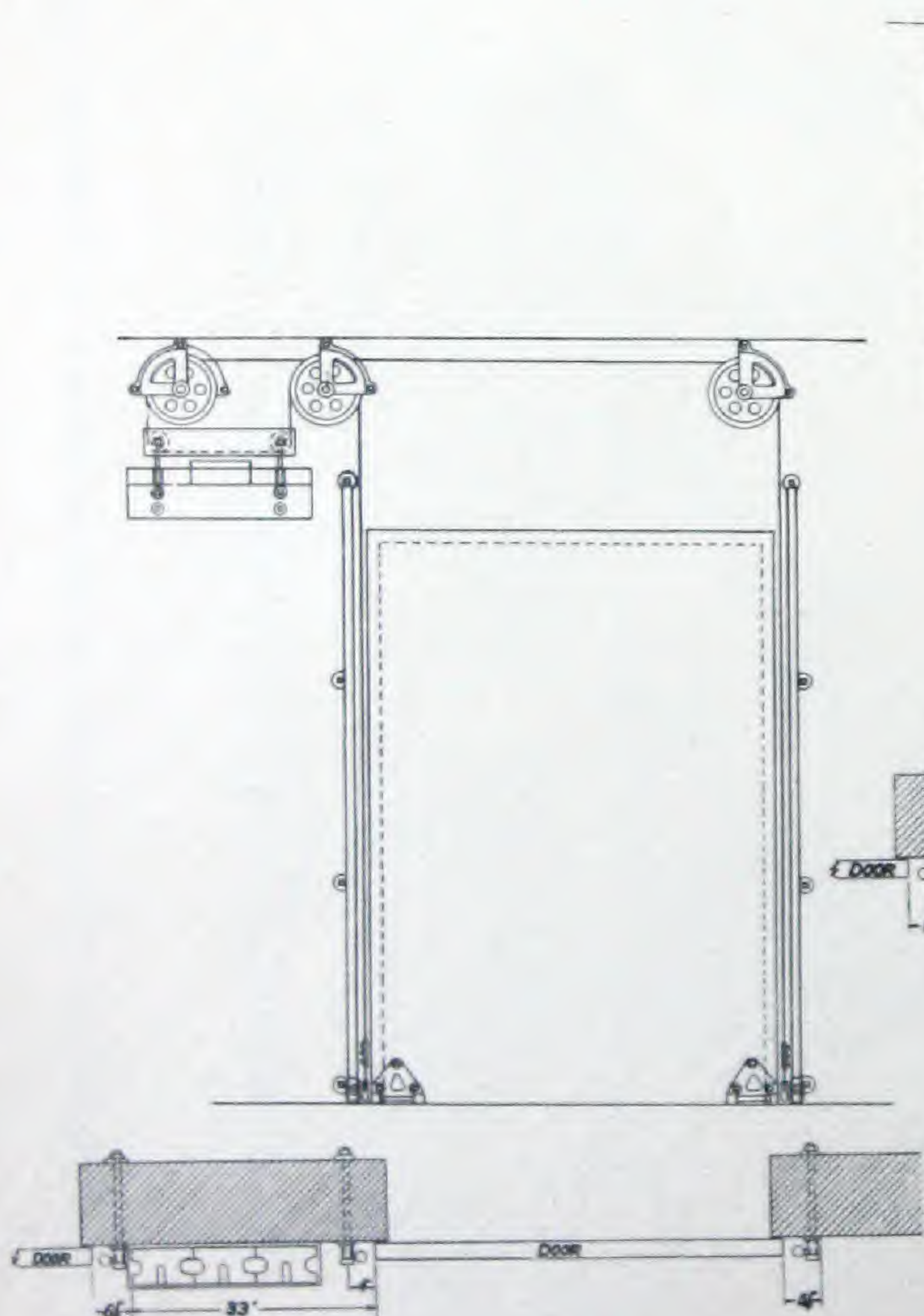
Detail A. Simple Counterweight.



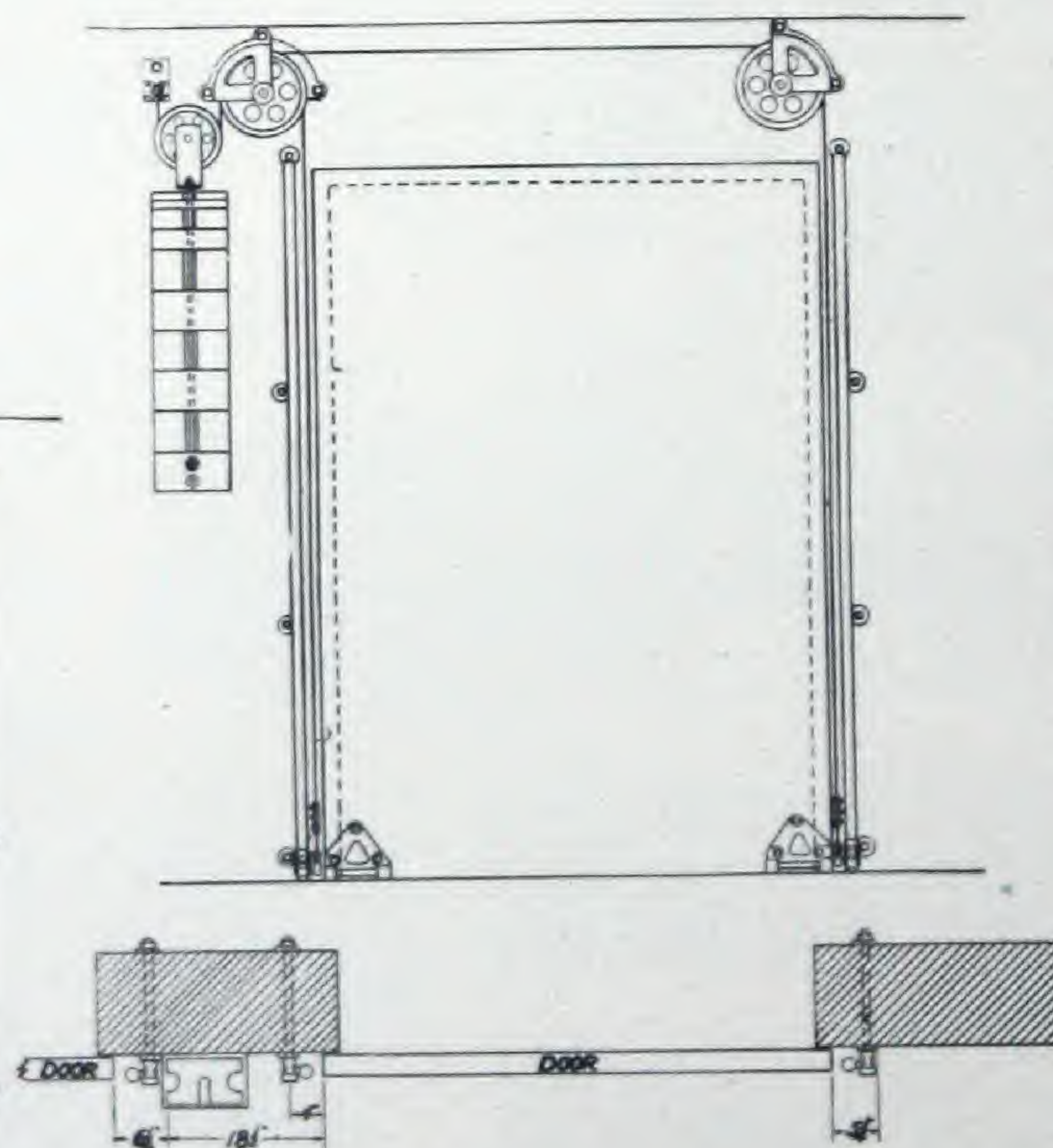
Detail B. Simple counterweight with opening cut through floor to permit full travel of counterweights.



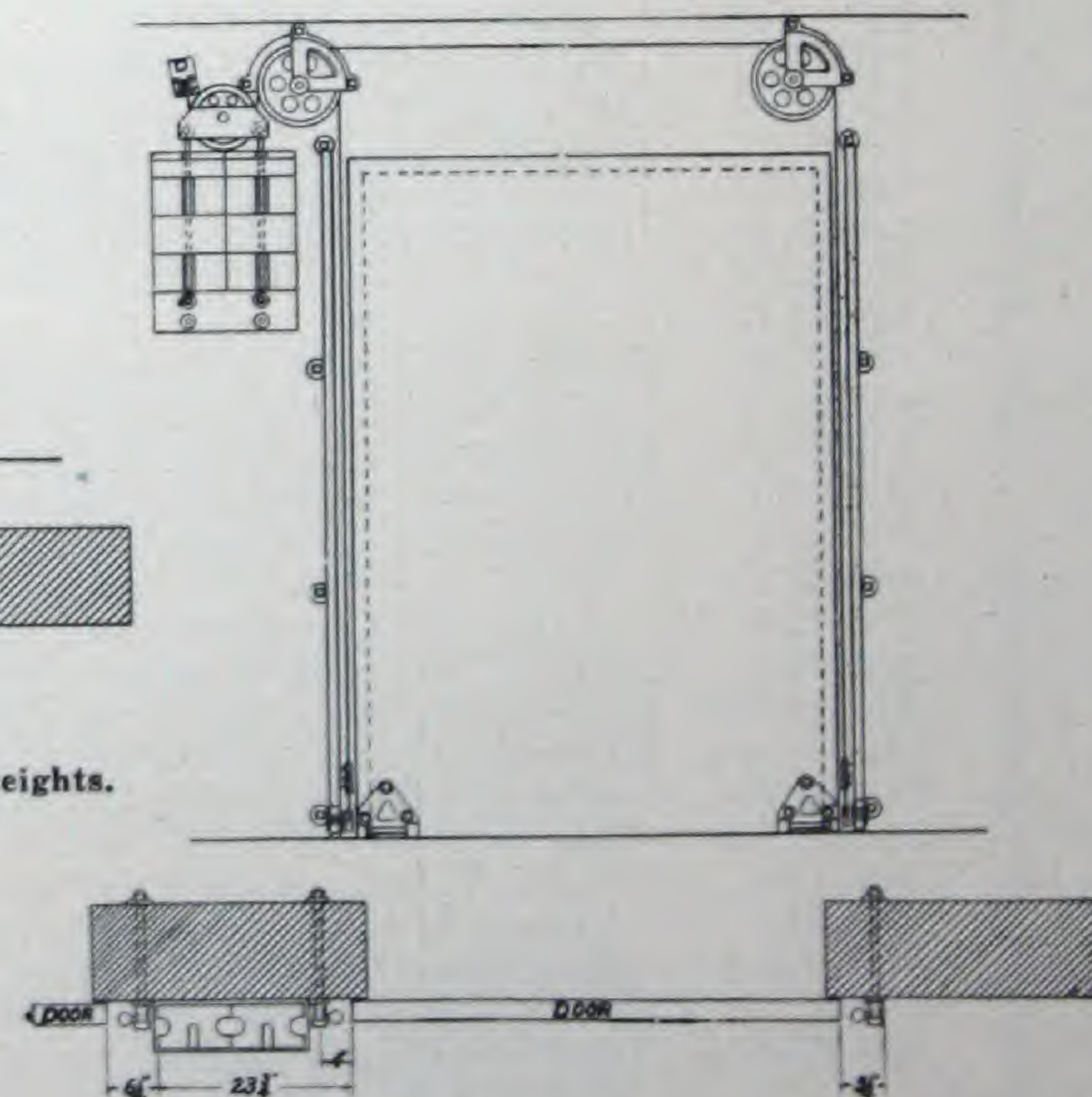
Detail C. Simple counterweight. Weight twice the width of weights shown in details A and B.



Detail D. Simple counterweight. Weight is three times the width of weights shown in Details A and B.

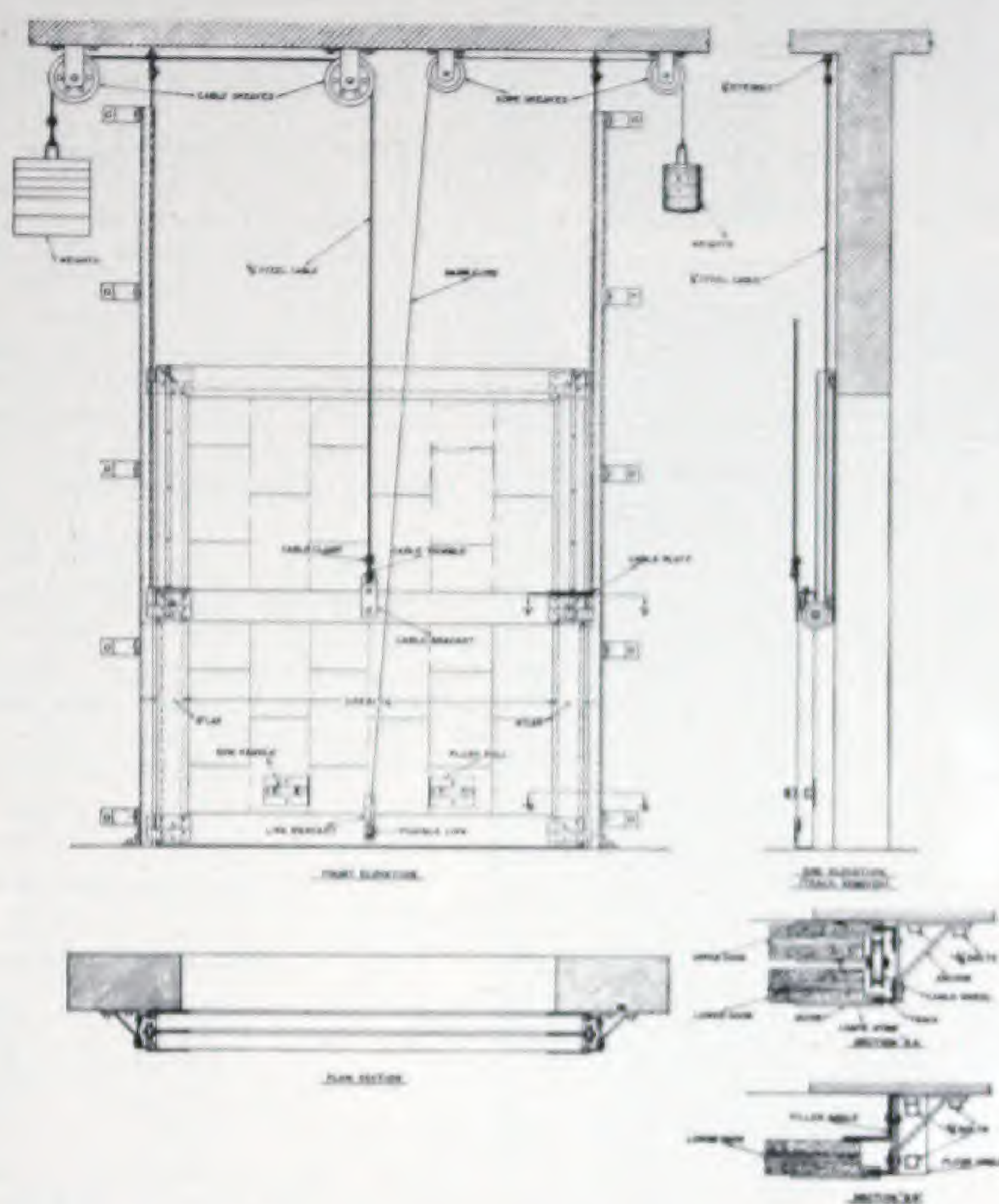


Detail F. Compounded counterweights.



Detail G. Compounded counterweights. Weights are twice the width of weights in detail F.

No. 402-2 for Two-ply (1 3/4") Tin Clad Doors.
No. 402-3 for Three-ply (2 5/8") Tin Clad Doors.
No. 1402 for "FyeR-Wall" Sheet Metal Doors.



List Price

Height of Opening	Doors less than 300 lbs. List Price	*Doors 300 lbs and over List Price
5 feet.....	\$130.00	\$140.00
6 feet.....	140.00	154.00
7 feet.....	154.00	170.00
8 feet.....	170.00	180.00
9 feet.....	180.00	195.00
10 feet.....	195.00	210.00

Counter balance weights per pound.....	.08
Discount.....	

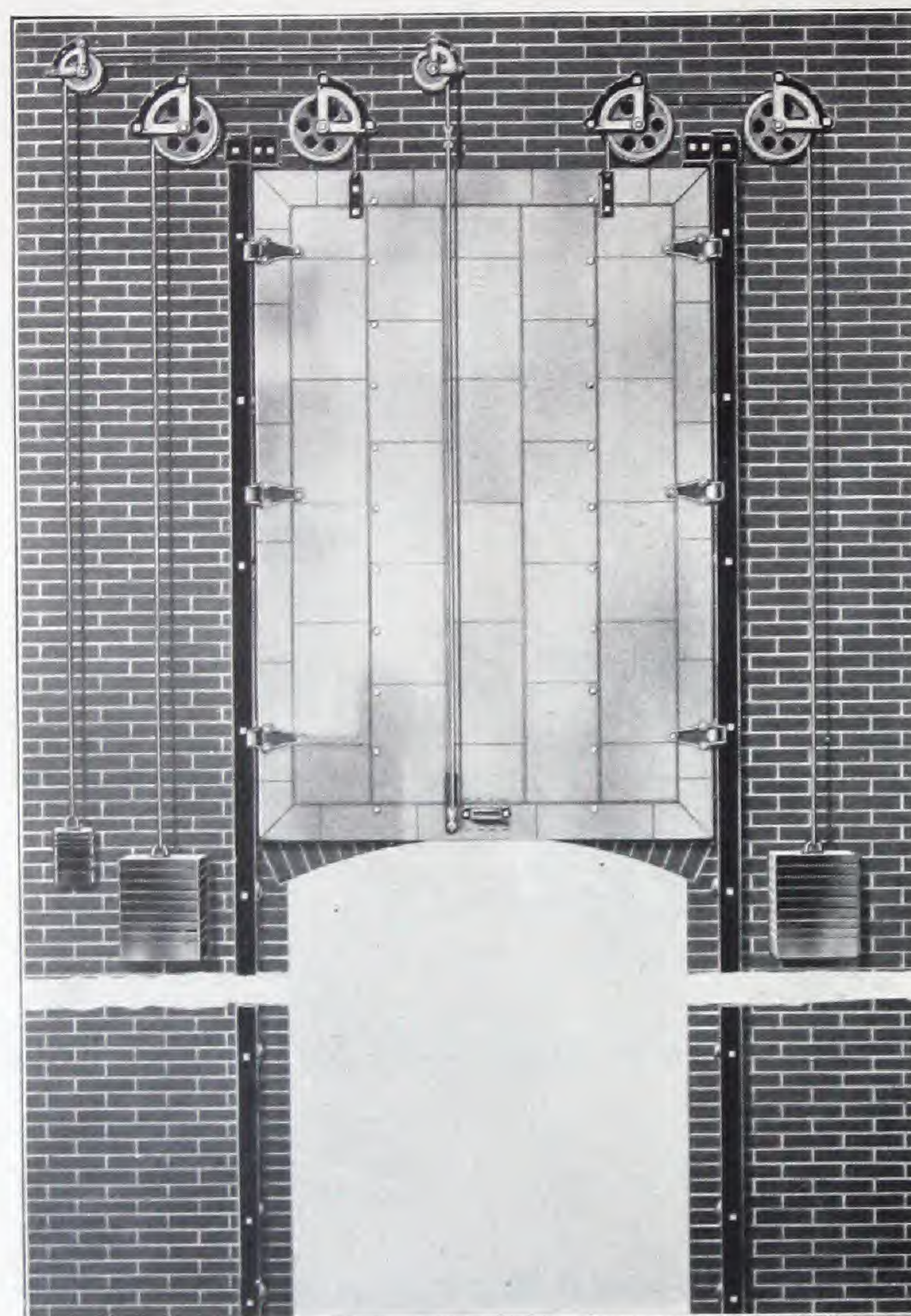


R-W Two Link Flat Track Vertical Fire Door Fixtures For Single Vertical Doors

R-W No. 203-2 for Two-ply (1 $\frac{3}{4}$ inch) Tin Clad Doors.

R-W No. 203-3 for Three-ply (2 $\frac{5}{8}$ inch) Tin Clad Doors.

R-W No. 1203 for "FyeR-Wall" Sheet Metal Doors.



This hardware is approved and labeled under directions of the National Board of Fire Underwriters. This type of fixture is recommended only for openings where slide or swing fixtures cannot be used on account of obstructions. The vertical balance fire doors and fixtures are made to act by gravity and close automatically at the approach of fire. Two sets of weights are used on doors weighing less than three hundred pounds; three sets on doors weighing three hundred pounds and over. As shown in the illustration, the fusible link is in the circuit which supports the light weight. Heavy counterbalance weights are attached by wire cable to the top of door and are adjusted to prevent sudden dropping of the door, allowing same to close slowly when link fuses, which releases the small weights. Upper illustration shows fixtures for doors weighing less than three hundred pounds, lower illustration for doors weighing three hundred pounds and over.

List Price

The following list price includes guides, track and fixtures complete with all bolts and screws for attaching parts to door and heavy cast washers for wall bolts. Counterbalance weights are not included in list price or weight of fixtures. Wall bolts also are not included but will be furnished at moderate price if thickness of wall is given.

Height of Opening	Doors less than 300 lbs.		Doors 300 lbs and over	
	List Price	Weight	List Price	Weight
5 feet.....	\$28.05	201	\$37.90	238
6 feet.....	30.10	219	40.20	256
7 feet.....	32.15	237	42.50	274
8 feet.....	34.20	255	44.85	292
9 feet.....	36.25	273	47.15	310
10 feet.....	38.30	291	49.45	328

*No. 203-2, 203-3 or 1203 fixtures only, weight 101 lbs. for doors less than 300 lbs. Per set. \$17.90

*No. 203-2, 203-3 or 1203 fixtures only, weight 138 lbs., for doors 300 lbs and over. Per set. 26.35

No. 203-84 track only, with brackets, weight 4 $\frac{1}{2}$ lbs. Per foot..... .40

No. 203 Counter-balance weights. Per pound..... .08

*Fixtures only do not include track, cable, sash cord or weights.

Discount.....

Directions For Ordering.

STATE: First, number of openings and number of doors; whether doors are on one side or both sides of wall. If latter, mention if fixtures can be bolted together and state thickness of wall. Do not say doors when you mean openings, as doors must lap four inches on each side and at top.

Second, width and height of opening (mention width first).

Third, thickness of doors, if two-ply tin clad (1 $\frac{3}{4}$ -inch), three-ply tin clad (2 $\frac{5}{8}$ -inch) or "FyeR-Wall" sheet metal doors.

Fourth, thickness of walls, when wall bolts are required.

Fifth, distance from edge of opening to walls at right angles, if any. State distances from highest points of openings to nearest obstructions over head.

NOTE: This fixture requires height of opening plus nineteen inches of headroom and 15 inches and 21 inches of side wall room for doors weighing less than three hundred pounds; 21 and 28 inches side wall room for doors weighing three hundred pounds and over. Heavy weights should be specified equal to $\frac{7}{8}$ weight of door and small weights equal to $\frac{1}{8}$ weight of door.

Detail of parts shown on pages 62 and 63. See pages 82-85 for R-W Standard Approved and Labeled Tin Clad and R-W "FyeR-Wall" sheet metal doors. Hardware suitable for Merchant and Evans doors furnished when required.



R-W Two Link Round Track Vertical Fire Door Fixtures For Single Vertical Doors

R-W No. 603-2 for Two-ply (1 3/4 inch) Tin Clad Doors.

R-W No. 603-3 for Three-ply (2 5/8 inch) Tin Clad Doors.

R-W No. 1603 for "FyeR-Wall" Sheet Metal Doors.

This type of fixture is used for openings where obstructions do not permit the use of slide or swing fixtures.

Fixtures are the same as shown on opposite page, except that round track and guides are used.

Upper illustration shows fixtures for doors weighing less than 300 lbs.

Lower illustration shows fixtures for doors weighing 300 lbs. and over.



List Price

The following list price includes guides, track and fixtures complete with all bolts and screws for attaching parts to door, and heavy cast washers for wall bolts.

Counter-balance weights are not included in list price or weights of fixtures.

Wall bolts also are not included, but will be furnished at moderate price if thickness of wall is given.

Height of Opening	Doors less than 300 lbs.		Doors 300 lbs and over	
	List Price	Wgt., lbs.	List Price	Wgt., lbs.
5 feet.....	\$28.05	164	\$37.90	210
6 feet.....	30.10	177	40.20	223
7 feet.....	32.15	190	42.50	236
8 feet.....	34.20	203	44.85	249
9 feet.....	36.25	216	47.15	262
10 feet.....	38.30	229	49.45	275

*No. 603-2, 603-3 or 1603 fixtures only, weight 93 lbs., for doors less than 300 lbs.
Per set\$17.90

*No. 603-2, 603-3 or 1603 fixtures only, weight 129 lbs., for doors 300 lbs. and over.
Per set 26.35

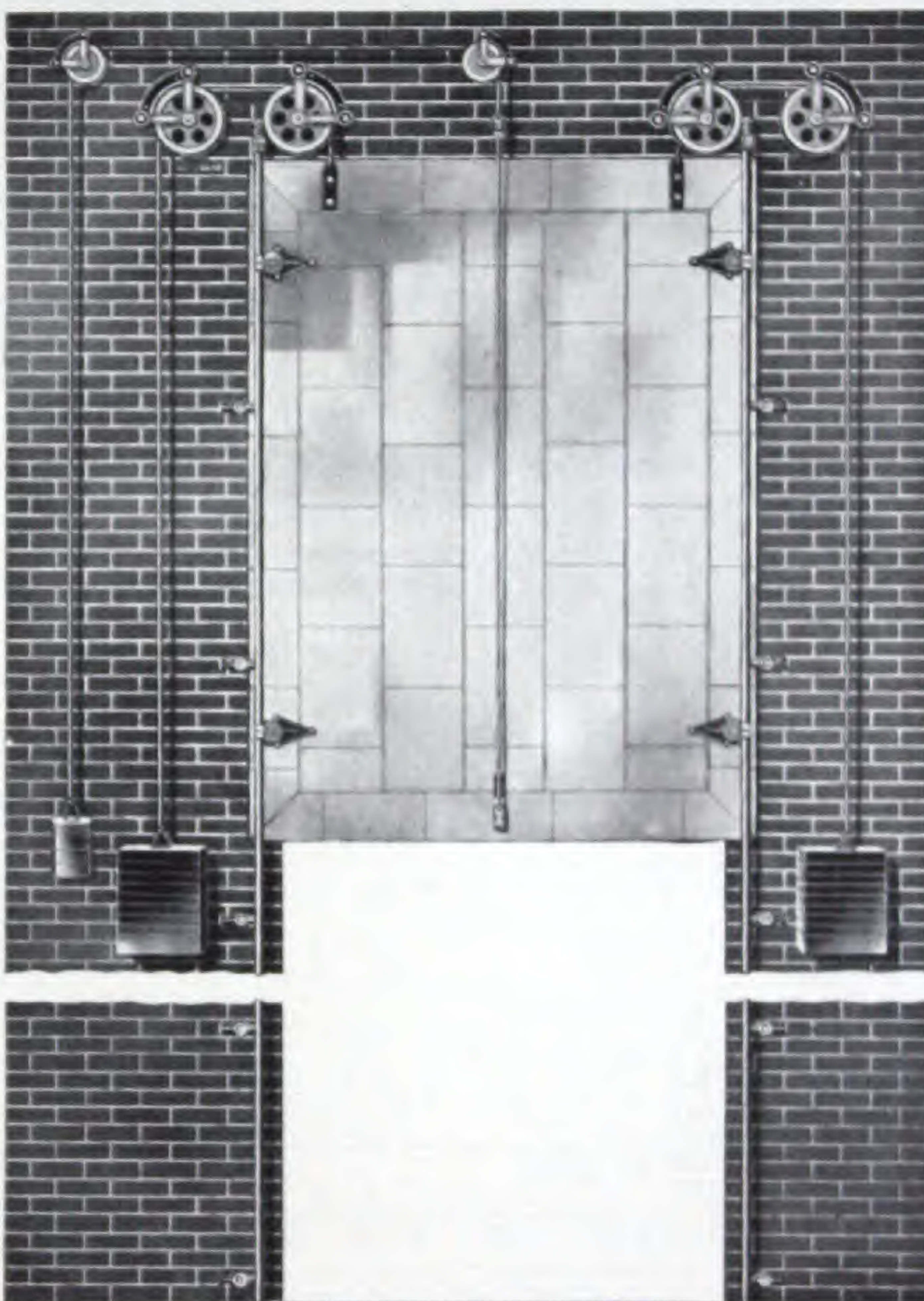
No. 603-TK Track only with brackets for two-ply Tin Clad Doors, weight 3 lbs.
Per foot40

No. 603 T-K Track only with brackets for three-ply Tin Clad Doors, or "FyeR-Wall" sheet metal doors, weight 3 1/4 lbs. Per foot40

No. 203 Counter-balance weights. Per pound .08

*Fixtures only do not include track, cable, sash cord or weights.

Discount.....



Directions For Ordering.

STATE: First, number of openings and number of doors; whether doors are on one side or both sides of wall. If latter, mention if fixtures can be bolted together and state thickness of wall. Do not say doors when you mean openings, as doors must lap four inches on each side and at top.

Second, width and height of opening (mention width first).

Third, Thickness of doors if two-ply Tin Clad (1 3/4-inch), three-ply Tin Clad (2 5/8-inch) or "FyeR-Wall" Sheet Metal Doors.

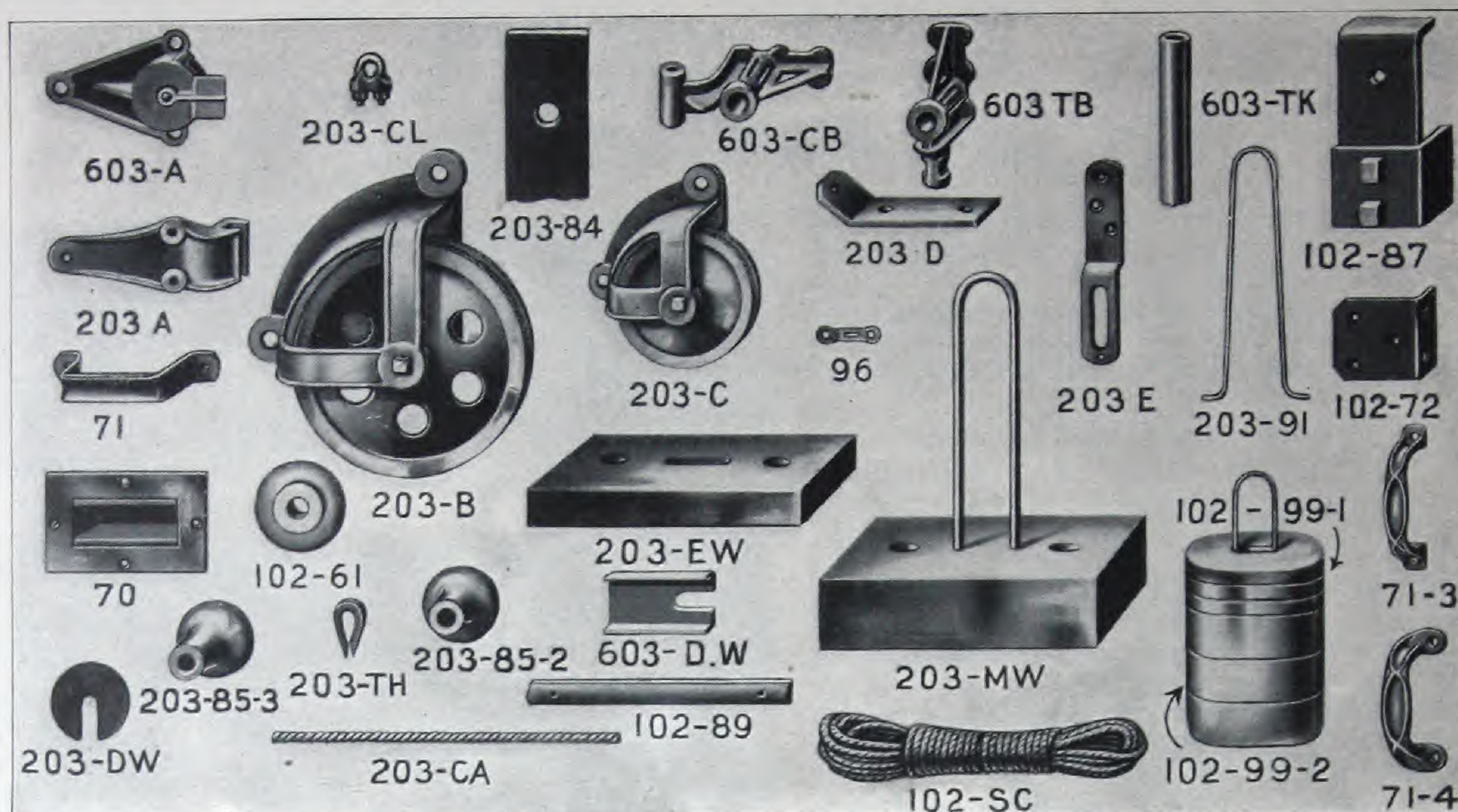
Fourth, thickness of Walls, when wall bolts are required.

Fifth, distance from edge of opening to walls at right angles, if any. State distances from highest points of openings to nearest obstructions overhead.

NOTE: This fixture requires height of opening plus nineteen inches of headroom and 16 inches and 22 inches of side wall room for doors weighing less than three hundred pounds; 22 and 29 inches side wall room for doors weighing three hundred pounds and over. Heavy weights should be specified equal to 3/4 weight of door and small weights to 1/2 weight of door.

Detail of parts shown on page 62. See pages 82-85 for R-W Standard Approved and Labeled Tin Clad and R-W "FyeR-Wall" Sheet Metal Doors.

Detail of Parts for Nos. 203 and 603 Vertical Sliding Fire Door Fixtures



NOTE: For description and prices see next page.

WALL BOLT LIST FOR NOS. 203-2, 203-3 AND 1203 FIRE DOOR FIXTURES

Wall Bolts are not furnished with sets of fixtures regularly but will be furnished at prevailing market prices when thickness of wall is given and customer requests them. The table below gives the number and size of bolts required for various sized openings. Note that the number of bolts is the same for hardware installed on one or both sides of wall.

Fixture Bolts Are Used to Fasten	LENGTH OF BOLTS FOR:				LENGTH OF BOLTS FOR:			
	Opening to 4'10" high	Opening to 4'11" high	Opening to 7'6" high	Opening to 7'7" high	No. 203-2 Fixtures		No. 203-3 and 1203 Fixtures	
					On one side of wall	Both Sides of wall	On one side of wall	Both Sides of wall
Center Track Brackets.....	10	14	18	22	Wall thickness plus 3 1/2"	plus 4 1/2"	Wall thickness plus 4 1/2"	plus 6"
Top Track Brackets.....	2	2	2	2	Wall thickness plus 4"	plus 5"	Wall thickness plus 5"	plus 7"
Cable Pulleys								
Doors less than 300 lbs.....	4	4	4	4	Wall thickness plus 3"	plus 3"	Wall thickness plus 3"	plus 3"
Doors 300 lbs and over.....	8	8	8	8	Wall thickness plus 3"	plus 3"	Wall thickness plus 3"	plus 3"
*Rope Pulley.....	4	4	4	4	Wall thickness plus 3"	plus 3"	Wall thickness plus 3"	plus 3"
Total 3/4" Bolts in sets for doors less than 300 lbs.....	16	20	24	28				
Total 5/8" Bolts in sets for doors less than 300 lbs.....	4	4	4	4				
Total 3/4" Bolts in sets for doors 300 lbs. and over.....	20	24	28	32				
Total 5/8" Bolts in sets for doors 300 lbs. and over.....	4	4	4	4				

WALL BOLT LIST FOR NOS. 603-2, 603-3 AND 1603 FIRE DOOR FIXTURES

Fixture Bolts Are Used to Fasten	LENGTH OF BOLTS FOR:							
	Open'g to 2'10" high	Open'g to 3'9" high	Open'g to 3'10" high	Open'g to 4'9" high	Open'g to 4'10" high	Open'g to 5'9" high	Open'g to 6'10" high	Open'g to 7'10" high
Track Brackets.....	10	12	14	16	18	20	22	24
Cable Pulleys								
Doors less than 300 lb.	4	4	4	4	4	4	4	4
Doors 300 lb. and over	8	8	8	8	8	8	8	8
*Rope Pulley.....	4	4	4	4	4	4	4	4
Total 3/4" Bolts in sets for doors less than 300 lbs.....	14	16	18	20	22	24	26	28
Total 5/8" Bolts in sets for doors less than 300 lbs.....	4	4	4	4	4	4	4	4
Total 3/4" Bolts in sets for doors 300 lbs. and over.....	18	20	22	24	26	28	30	32
Total 5/8" Bolts in sets for doors 300 lbs. and over.....	4	4	4	4	4	4	4	4

*NOTE: All Track and Cable Pulley Bolts are 3/4" diameter.

Rope Pulley Bolts are 5/8" diameter.

FIRE DOORS & HARDWARE



PACKING LIST AND LIST PRICE OF PARTS USED ON NOS. 203, 1203, 603, AND 1603 FIXTURES

No. 203-2 or 603-2 For Doors Weighing Under 300 lbs. Over 300 lbs.		No. 203-3 or 603-3 For Doors Weighing Under 300 lbs. Over 300 lbs.		No. 1203 or 1603 For Doors Weighing Under 300 lbs. Over 300 lbs.		DESCRIPTION	List Price
1	1	1	1	1	1	No. 70-1 Flush Pull, each.....	\$.20
1	1	1	1	1	1	No. 70-2 Flush Pull, each.....	.25
1	1	1	1	1	1	No. 71-1 Bow Handle, each.....	.10
1	1	1	1	1	1	No. 71-2 Bow Handle, each.....	.15
1	1	1	1	1	1	No. 71-3 Bow Handle, each.....	.20
1	1	1	1	1	1	No. 71-4 Bow Handle, each.....	.25
1 Pc.	1 Pc.	1 Pc.	1 Pc.	1 Pc.	1 Pc.	No. 96 Fusible Links, each.....	.30
*	*	*	*	*	*	No. 102-SC Sash Cord, per ft....	.05
2 Pcs.	2 Pcs.	2 Pcs.	2 Pcs.	2 Pcs.	2 Pcs.	No. 102-61 Cast Washers, each...	.15
*	*	*	*	*	*	No. 102-89 Chafe Strips. Length equals height of opening less 4", each .....	.40
2	4	2	4	2	4	No. 102-99 Weights, 1/8 weight of doors, per lb .....	.08
2	2	2	2	2	2	No. 203-B Cable Pulleys, each....	3.50
2	4	2	4	2	4	No. 203-C Rope Pulleys, each....	1.75
1	2	1	2	1	2	No. 203-CL Cable Clamps, each...	.20
1	1	1	1	1	1	No. 203-D Cable Brackets, each...	.25
*	*	*	*	*	*	No. 203-E Link Bracket with No. 96 Fusible Link attached, ea	.55
1	2	1	2	1	2	No. 203 EW Weights, per lb.....	.08
1 Pc.	2 Pcs.	1 Pc.	2 Pcs.	1 Pc.	2 Pcs.	No. 203 MW Weights, per lb.....	.08
1	1	1	1	1	1	No. 203-CA 1/8" Cable, per ft....	.14
2	4	2	4	2	4	No. 203-91 Weight Holder, each..	.20
1	1	1	1	1	1	No. 203 Thimbles, each.....	.10
						Package Screws and Bolts.	

THE FOLLOWING FIXTURES ARE USED ON NO. 203 AND NO. 1203 FIXTURES ONLY

203-2 Fixtures		203-3 Fixtures		1203 Fixtures		DESCRIPTION	List Price
4	4	4	4	2	2	No. 102-72 Bumper Shoes, each..	\$.10
2	2	2	2	2	2	No. 102-87 Bumpers, each.....	1.00
4, 6 or 8	4, 6 or 8	4, 6 or 8	4, 6 or 8	4, 6 or 8	4, 6 or 8	No. 203 A Guides, according to height of door, each.....	.50
*	*	*	*	*	*	No. 203-DW Drop Washers. (See table below) each.....	.10
2 Runs	2 Runs	2 Runs	2 Runs	2 Runs	2 Runs	No. 203-84 Track Length, equals twice height of opening plus 9", per ft .....	.40
*	*	*	*	*	*	No. 203-85-2 Track Brackets (See table below) each.....	.14
..	..	..	..	..	..	No. 203-85-3 Track Brackets (See table below) each.....	.18
..	..	..	..	4, 6 or 8	4, 6 or 8	No. 1203 A Guides, according to height of door.....	.50

THE FOLLOWING FIXTURES ARE USED ON NO. 603 AND NO. 1603 FIXTURES ONLY

603-2 Fixtures		603-3 Fixtures		1603 Fixtures		DESCRIPTION	List Price
4	4	4	4	4	4	603-A Guides	\$.50
*	*	*	*	*	*	No. 603 CB-2 Center Brackets (See table below) each.....	.30
..	..	..	..	..	..	No. 603 CB-3 Center Brackets (See table below) each.....	.30
2	2	2	2	2	2	No. 603 TB-2 Top Brackets, each..	.30
*	*	*	*	*	*	No. 603 TB-3 Top Brackets, each..	.30
2 Runs	2 Runs	2 Runs	2 Runs	2 Runs	2 Runs	No. 603-DW Drop Washers (See table below) each.....	.10
						No. 603 Track, Length equals twice height of opening plus 4", per ft.....	.40

TABLE APPLYING TO NO. 203 AND NO. 1203 FIXTURES ONLY

Height of Opening	Nos. 203-85-2 and 203-85-3 Center Brackets	No. 203-DW Drop Washers	No. 102-61 Washers For Doors less than 300 lbs.	No. 102-61 Washers For Doors 300 lbs. and over
Up to 4' 10".....	12	12	20	24
4' 11" to 7' 6".....	16	16	24	28
7' 7" to 10' 2".....	20	20	28	32
10' 3" to 12' 10".....	24	24	32	36
	Fixtures only require			8

TABLE APPLYING TO NO. 603 AND NO. 1603 ONLY

	Nos. 603 CB-2 and 603 CB-3	*No. 603-DW	No. 102-61 Washers for Doors less than 300 lbs.	No. 102-61 Washers for Doors 300 lbs. and over
2' 10" to 3' 9".....	8	10	18	22
3' 10" to 4' 9".....	10	12	20	24
4' 10" to 5' 9".....	12	14	22	26
5' 10" to 6' 9".....	14	16	24	28
6' 10" to 7' 9".....	16	18	26	30
7' 10" to 8' 9".....	18	20	28	32
8' 10" to 9' 9".....	20	22	30	34
9' 10" to 10' 9".....	22	24	32	36
	Fixtures only require			8

*Packed with 3-ply fixtures only.



R-W Automatic Fire Door Fixtures

For Single Swinging Doors

R-W No. 406-2 For Two-ply (1 $\frac{3}{4}$ -inch) Tin Clad Doors.

R-W No. 406-3 For Three-ply (2 $\frac{5}{8}$ -inch) Tin Clad Doors.

R-W No. 1406 For "FyeR-Wall" Sheet Metal Doors.



The hardware illustrated is included in list of Fire Door Hardware approved and labeled by National Board of Fire Underwriters after exhaustive tests by the Underwriters' Laboratories, (Inc.)

The automatic link and cord arrangement on this fixture extends above the opening to ceiling, and when used with doors on both sides of wall same extends through, so that the fusing of link on either side will cause the doors to close. No. 643 Door Closer and Check (page 90) may be substituted for weight closing device if desired. Fixtures furnished for either flush or lap doors.

List Price For Nos. 406-2, 406-3 and 1406 Fire Door Fixtures.

No. 406-2 406-3 or 1406 Fixtures complete, for doors up to 5 ft. 9 in. high (with double latches), weight 90 lbs. Per set.....	\$17.00
No. 406-2 406-3 or 1406 Fixtures complete, for doors 5 ft. 10 in. to 8 ft. 9 in. high (with triple latches) weight 130 lbs. Per set.....	20.00
No. 406-2, 406-3 or 1406 Fixtures complete, for doors 6 ft. 10 in. to 10 ft. 4 in. high, (with quadruple latches), weight 144 lbs. Per set.....	24.00
*No. 406-2, 406-3 or 1406 Fixtures only, less automatics, deduct \$8.00 from price of Fixtures complete.	
No. 406-2, 406-3 or 1406 Automatics only, weight 30 lbs. Per set.....	8.00
	Discount.....

Unless otherwise specified on order, fixtures complete will be sent for 2 $\frac{3}{8}$ -inch doors.

*Use this price when No. 643 Door Check is used for automatically closing the doors.

Directions For Ordering.

STATE: First, number of openings and number of doors; whether doors are on one side or both sides of wall. If latter, mention if fixtures can be bolted together and state thickness of wall.

Second, width and height of opening (mention width first). Do not say doors when you mean openings.

Third, are doors to lap the wall; to be mounted in angle iron frame on the face of the wall in channel frames or are doors to be mounted in rabbetted frames? See illustration of various types at the bottom of page 65.

Fourth, thickness of doors, if two-ply tin clad (1 $\frac{3}{4}$ -inch), three ply tin clad (2 $\frac{5}{8}$ -inch) or "FyeR-Wall" sheet metal doors.

Fifth, thickness of wall when wall bolts are required.

Sixth, distance from edge of opening to walls at right angles, if any. State distances from highest points of openings to nearest obstructions overhead.

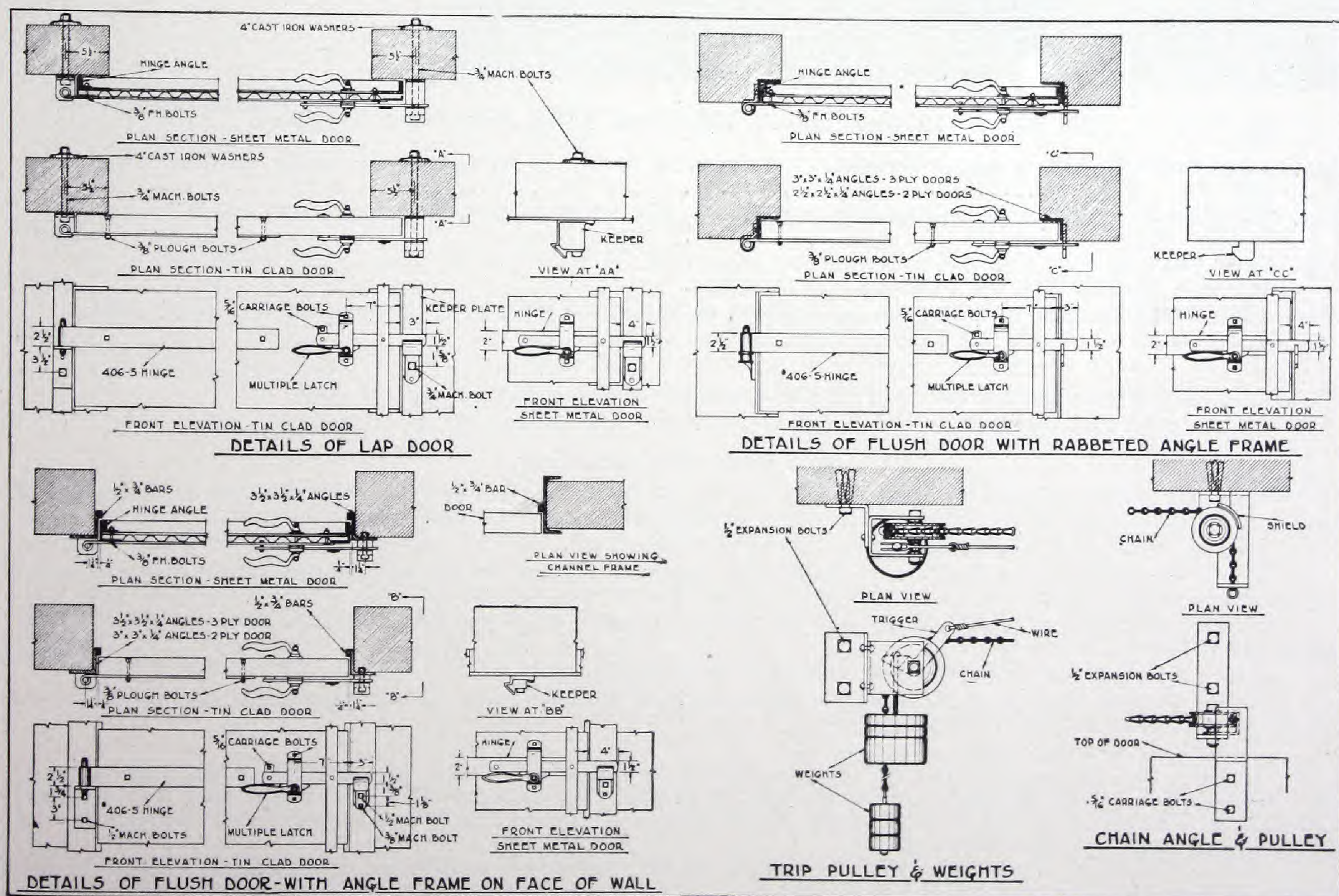
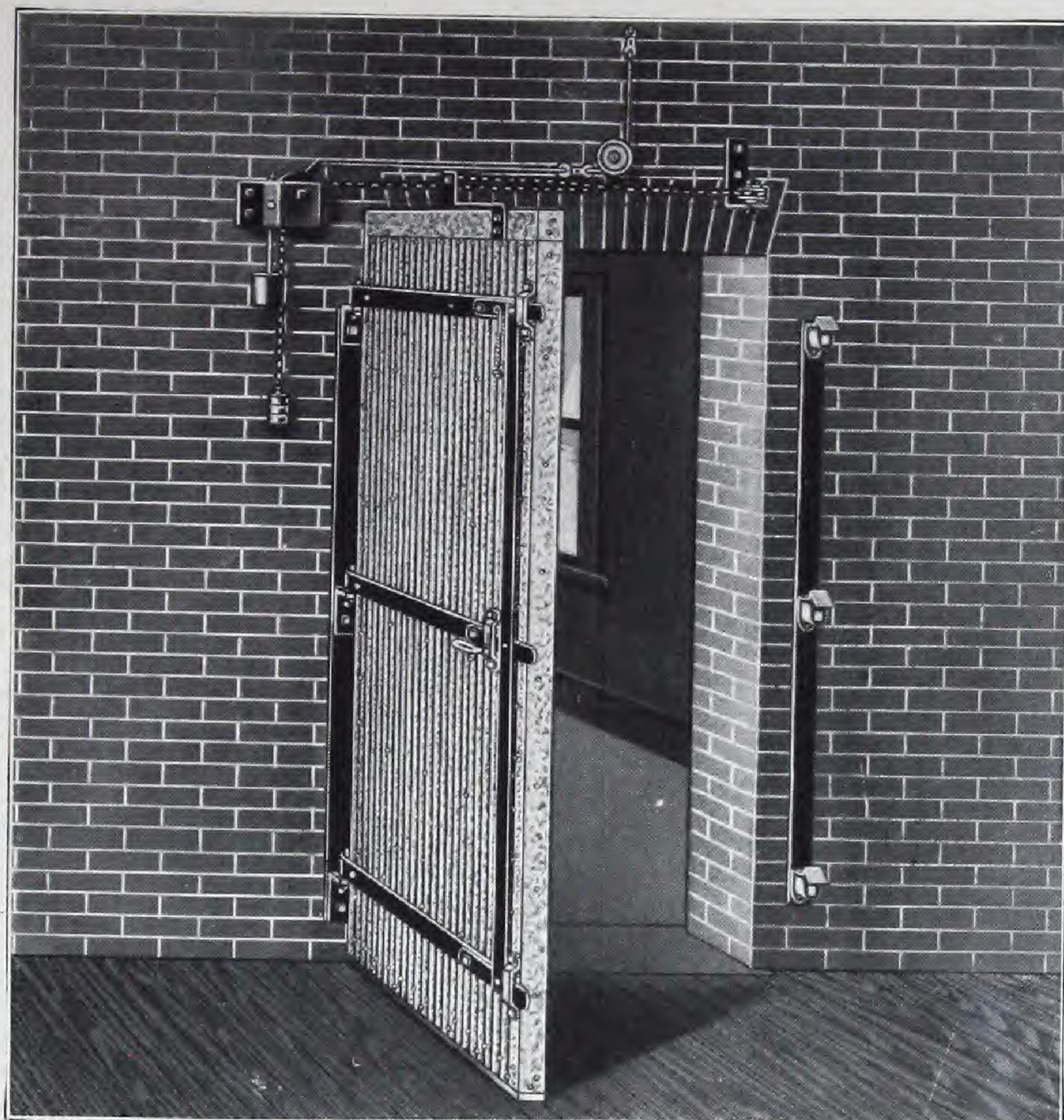
Seventh, is opening square or arched top?

NOTE: This fixture requires 9" of headroom above top of door, (not openings), 11" of side wall space beyond door on hinge side and 4" on latch side. Detail of parts shown on pages 68 and 69. See pages 82-85 for R-W Standard Approved and labeled tin clad and R-W "FyeR-Wall" Sheet Metal Doors. Approved hardware suitable for Merchant and Evans Doors furnished when required. Metal frames for flush doors shown on pages 86-88.

Special arrangements of automatic closing devices shown on page 96.



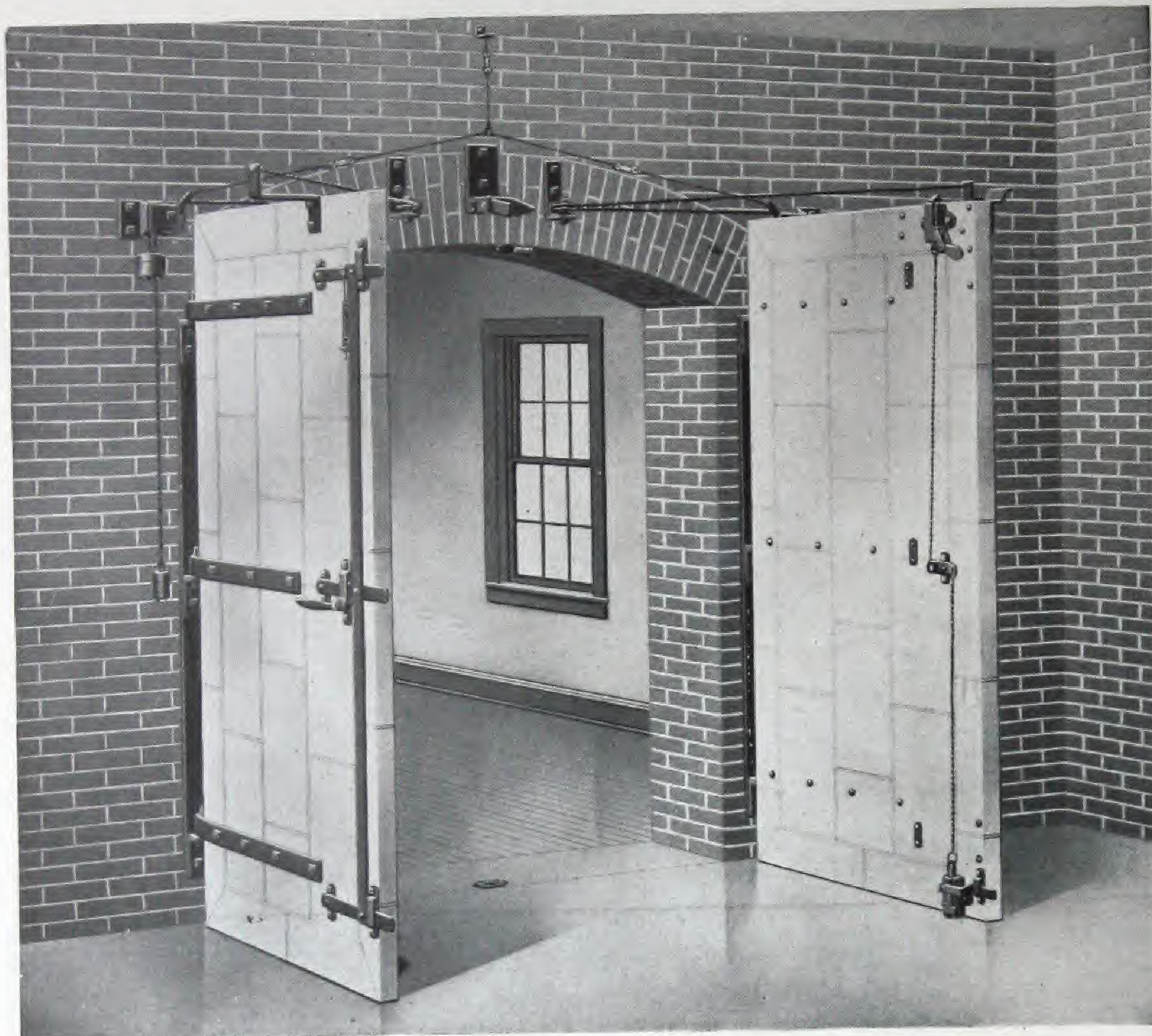
R-W Automatic Fire Door Fixtures For Single Swinging Doors





R-W Automatic Fire Door Fixtures for Swinging Doors in Pairs

R-W No. 506-2 for Two-ply (1 $\frac{3}{4}$ -inch) Tin Clad Doors.
R-W No. 506-3 for Three-ply (2 $\frac{5}{8}$ -inch) Tin Clad Doors.
R-W No. 1506 for "FyeR-Wall" Sheet Metal Doors.



The hardware illustrated is included in list of Fire Door Hardware approved and labeled by National Board of Fire Underwriters after exhaustive tests by the Underwriters' Laboratories, (Inc.)

The automatic link and cord arrangement of this fixture extends above the opening to ceiling, and when used with doors on both sides of wall same extends through, so that the fusing of link on either side will cause the doors to close. No. 643 Door Closer and Check (page 90) may be substituted for weight closing device if desired.

List Price for Nos. 506-2, 506-3 and 1506 Fire Door Fixtures.

Nos. 506-2, 506-3 or 1506 Fixtures complete, for doors up to 5 ft. 9 in. high (with double latches) weight 166 lbs. Per set.....	\$35.00
Nos. 506-2, 506-3 or 1506 Fixtures complete, for doors 5 ft. 10 in. to 8 ft. 9 in. high (with triple latches), weight 220 lbs. Per set.....	39.00
Nos. 506-2, 506-3 or 1506 Fixtures complete, for doors 6 ft. 10 in. to 10 ft. 4 in. high, (with quadruple latches), weight 275 lbs. Per set.....	44.00
*Nos. 506-2, 506-3 or 1506 Fixtures, less automatics, deduct \$18.00 from price of complete sets listed above.	
Nos. 506-2 506-3 or 1506 Automatics only, weight 64 lbs. Per set.....	18.00
	Discount.....

*Use this price when No. 643 Door Check is used for automatically closing the door.

Unless otherwise specified on order, fixtures complete will be sent for 2 $\frac{5}{8}$ -inch doors.

Directions For Ordering.

STATE: First, number of openings and number of doors; whether doors are on one side or both sides of wall. If latter mention if fixtures can be bolted together and state thickness of wall.

Second, width and height of opening. (Mention width first). Do not say doors when you mean openings.

Third, Are doors to lap wall; to be mounted in angle iron frame on the face of the wall in channel frames or are doors to be mounted in rabbetted frames? (See illustrations of various types at the bottom of page 67).

Fourth, thickness of doors, if two-ply tin clad (1 $\frac{3}{4}$ -inch), three-ply tin clad (2 $\frac{5}{8}$ -inch) or "FyeR-Wall" Sheet Metal Doors.

Fifth, thickness of wall when wall bolts are required.

Sixth, distance from edge of opening to walls at right angles, if any. State distances from highest points of openings to nearest obstructions overhead.

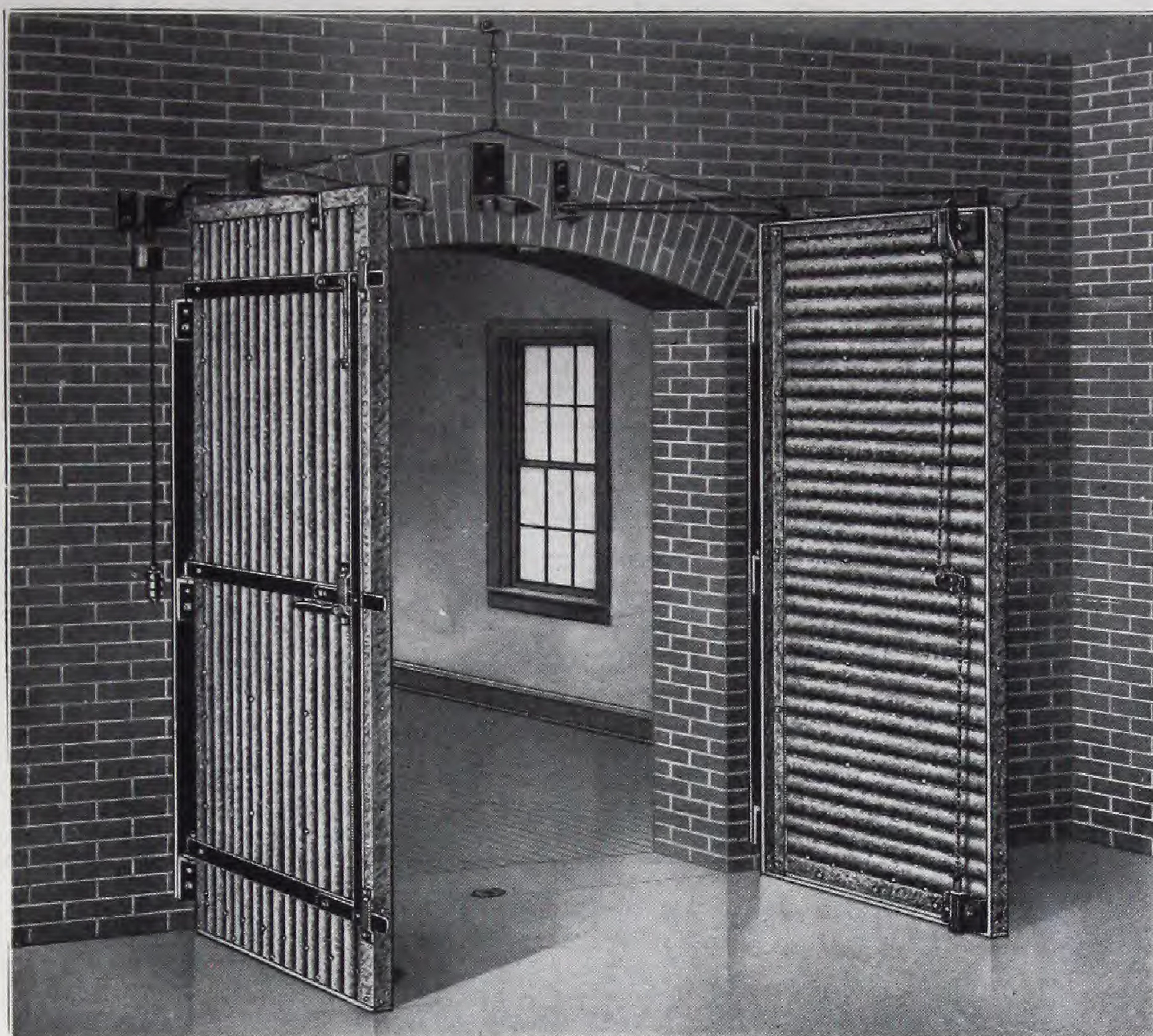
Seventh, is opening square or arched top?

NOTE: This fixture requires 10" of headroom above top of door, (not opening), 11" of side wall space on each side of door. Detail of parts shown on pages 68 and 69. See pages 82-85 for R-W Standard Approved and Labeled tin clad and R-W "FyeR-Wall" sheet metal doors. Approved hardware suitable for Merchant and Evans Doors furnished when required.

Metal frames for flush doors shown on pages 86-88. Special arrangements of automatic closing devices shown on page 96.

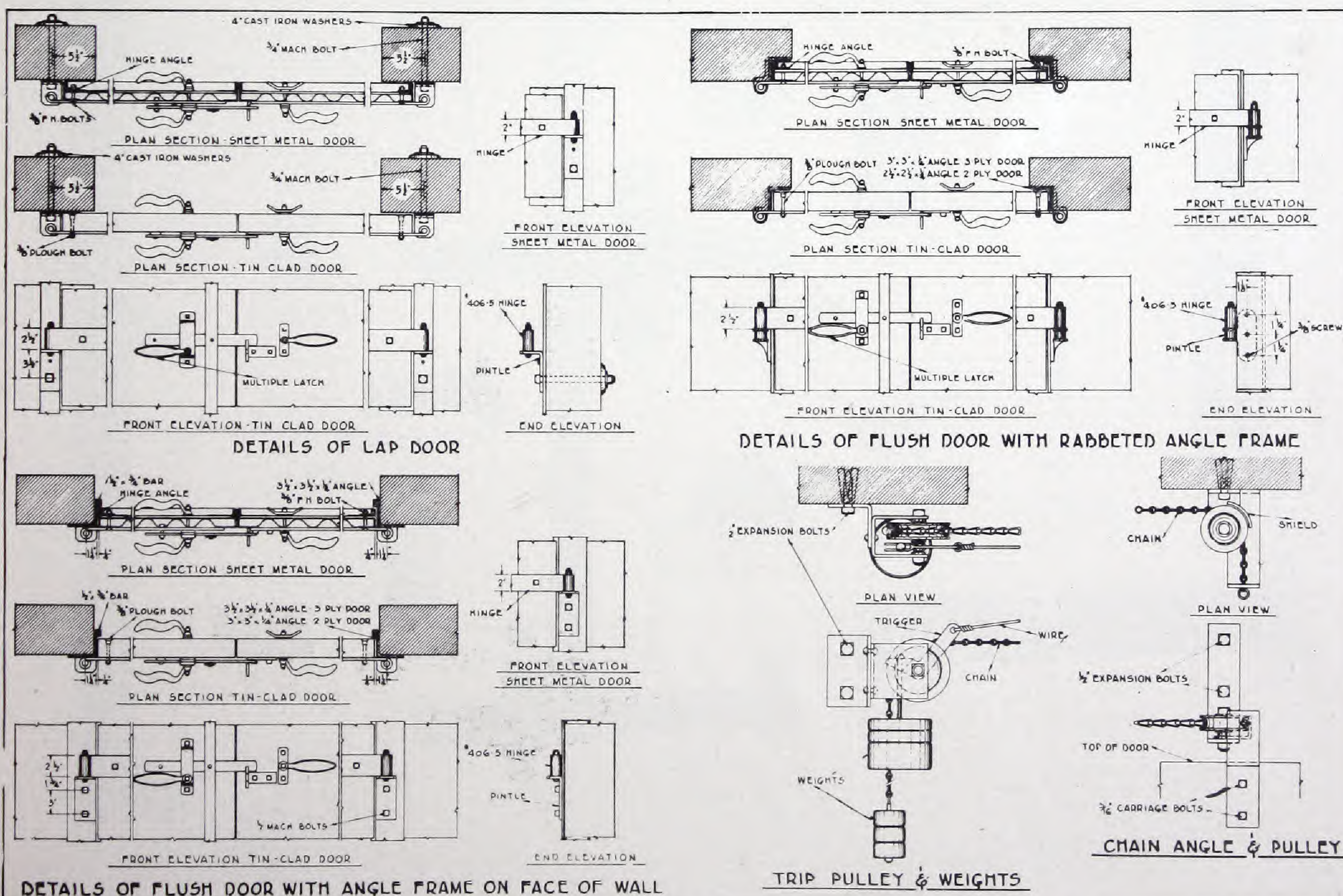
R-W Automatic Fire Door Fixtures

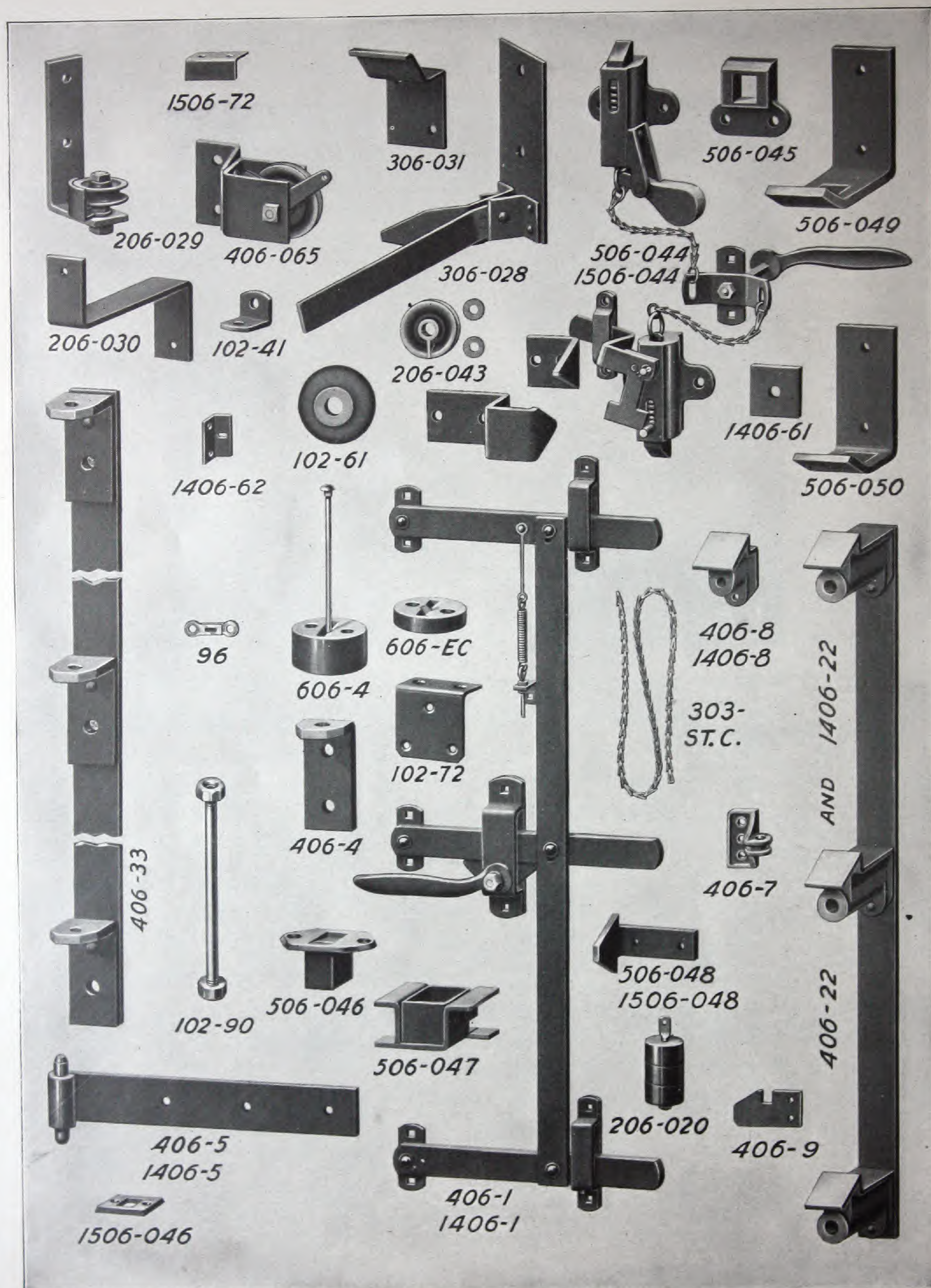
For Swinging Doors in Pairs



**No. 1506
Fire Door
Hardware**

**Description
and Prices
on Page 66**





406-2	406-3	1406	506-2	506-3	1506	No.	DESCRIPTION	LIST PRICE
2	2	2	3	3	3	96	Fusible Links, each.....	\$.30
1	1	1	1	1	1	102-41	Rope, Angle, each.....	.15
*	*	*	*	*	*	102-61	Cast Washers (as required). Packed only with lap door fixtures, each.....	.15
1	1	1	1	1	1	102-72	Bumper Shoe, each.....	.10
1	1	1	1	1	1	102-90	Chain Tube (only when fixtures are used on both sides of wall), each.....	.60
1	1	1	2	2	2	206-020	Weight (3 small) with weight holder, each....	.30
1	1	1	2	2	2	206-029	Chain Pulley, each.....	1.50
1	1	1	2	2	2	206-030	Chain Angle, each.....	.25
1	1	1	*	*	*	206-043	Center Pulley, each.....	.25
1	1	1	1	1	1	303-ST	C. Sash Chain, per ft.....	.10
1	1	1	1	1	1	306-028	Door Control, each.....	1.50
1	1	1	1	1	1	306-031	Door Control Lifter, each.....	.25
1	1	1	2	2	2	406-065	Pulley & Trip complete.....	2.00
One multiple Latch furnished with each set of fixtures, Double, Triple, or Quadruple, according to height of door.								
1	1	1	1	1	1	406-1-2	Double Latch (Latch Bars 30" or 42" cen- ters as required) each.....	4.00
1	1	1	1	1	1	406-1-3	Double Latch (Latch Bars 30" or 42" cen- ters as required) each.....	4.00
1	1	1	1	1	1	1406-1	Double Latch (Latch Bars 36" centers) each....	4.00
Doors from 5' 10" to 8' 9" high require triple latches								
1	1	1	1	1	1	406-1-2	Triple Latch (Latch Bars 27", 33" or 39" centers as required) each.....	5.00
1	1	1	1	1	1	406-1-3	Triple Latch (Latch Bars 27", 33" or 39" centers as required) each.....	5.00
1	1	1	1	1	1	1406-1	Triple Latch (Latch Bars 24", 30" or 36" centers as required) each.....	5.00
Doors from 8' 10" to 10' 4" high require quadruple latches								
1	1	1	1	1	1	406-1-2	Quadruple Latch (Latch Bars 30" or 34" centers as required) each.....	6.00
1	1	1	1	1	1	406-1-3	Quadruple Latch (Latch Bars 30" or 34" centers as required) each.....	6.00
1	1	1	1	1	1	1406-1	Quadruple Latch (Latch Bars 28" or 32" centers as required) each.....	6.00
*	*	*	*	*	*	406-4	Pintels for Flush Doors in angle iron frames on the face of the wall or channel frames, per pair.....	1.50
*	*	*	*	*	*	406-5	Hinge Straps as required, per pair. (See note)	1.50
*	*	*	*	*	*	406-7	Pintels for Flush Doors in rabbetted frames, pr.	1.50
*	*	*	*	*	*	406-8	Keepers for Flush Doors with angle iron frames on the face of the wall or channel frames, each.....	.50
*	*	*	*	*	*	406-9	Keepers for Flush Doors in rabbetted frames only, each.....	.40
1	1	1	1	1	1	1406-8	Keepers for Flush Doors with angle iron frames on the face of the wall or channel frames only, each.....	.50
1	1	1	1	1	1	506-048	Keepers for Double, Triple or Quadruple Latch,	.50
1	1	1	1	1	1	1506-048	Keepers for Double, Triple or Quadruple Latch,	.50
One multiple Keeper furnished with each set of fixtures for lap doors, Double, Triple or Quad- ruple, according to height of opening. Doors up to 5' 9" require double Keepers.								
1	1	1	1	1	1	406-22-2	Double Latch Keeper for Lap Door only, 30" or 42" centers as required, each.....	2.00
1	1	1	1	1	1	406-22-3	Double Latch Keeper for Lap Door only, 30" or 42" centers as required, each.....	2.00
1	1	1	1	1	1	1406-22	Double Latch Keeper for Lap Door only, 36" centers each.....	2.00
Doors from 5' 10" to 8' 9" high require Triple Keepers.								
1	1	1	1	1	1	406-22-2	Triple Latch Keeper for Lap Door only, 27", 33" or 39" centers as required, each.....	2.50
1	1	1	1	1	1	406-22-3	Triple Latch Keeper for Lap Door only, 27", 33" or 39" centers as required, each.....	2.50
1	1	1	1	1	1	1406-22	Triple Latch Keeper for Lap Door only, 24", 30" or 36" centers as required, each.....	2.50
Doors from 8' 10" to 10' 4" high require quadruple Keepers.								
1	1	1	1	1	1	406-22-2	Quadruple Latch Keeper 30" or 34" cen- ters as required, each.....	3.00
1	1	1	1	1	1	406-22-3	Quadruple Latch Keeper 30" or 34" cen- ters as required, each.....	3.00
1	1	1	1	1	1	1406-22	Quadruple Latch Keeper 28" or 32" cen- ters as required, each.....	3.00
1	1	1	1	1	1	1406-5	Hinge Straps as required, per pair. (See note).	—
1	1	1	1	1	1	406-33-2	Double Pintels for Lap Doors only 36", 48" or 60" centers as required, per pair.....	2.00
1	1	1	1	1	1	406-33-3	Double Pintels for Lap Doors only 36", 48" or 60" centers as required, per pair.....	2.00
1	1	1	1	1	1	406-33-2	Triple Pintels for Lap Door only 18", 24", 30", 36" or 42" centers as required, per pair.	3.00
1	1	1	1	1	1	406-33-3	Triple Pintels for Lap Door only 18", 24", 30", 36" or 42" as required, per pair.....	3.00
1	1	1	1	1	1	406-33-2	Quadruple Pintels (as above) 28" or 32" centers as required, per pair.....	4.00
1	1	1	1	1	1	406-33-3	Quadruple Pintels (as above) 28" or 32" centers as required, per pair.....	4.00
1	1	1	1	1	1	1406-61	Hinge Washer (one for each hinge), each.....	.10
1	1	1	1	1	1	1406-62	Hinge Angle (one for each hinge), each.....	.30
1	1	1	1	1	1	1506-72	Bumper Shoe, each.....	.40
1	1	1	1	1	1	506-044-2	Top & Bottom Bolt for standing door, each.....	3.50
1	1	1	1	1	1	506-044-3	Top & Bottom Bolt for standing door, each.....	3.50
1	1	1	1	1	1	1506-044	Top & Bottom Bolt for standing door, each.....	4.50
1	1	1	1	1	1	506-045	Keeper for top standing door bolt, (par- tition walls only), each.....	.50
1	1	1	1	1	1	506-046	Keeper for bottom standing door bolt, each....	1.00
1	1	1	1	1	1	1506-046	Keeper for bottom standing door bolt, each....	.50
1	1	1	1	1	1	506-047	Sill Box for No. 506-046 Keeper (only when concrete sills are used), each.....	.50
1	1	1	1	1	1	506-049-2	Keeper for top standing door bolt, for out- side doors only, each.....	.50
1	1	1	1	1	1	506-049-3	Keeper for top standing door bolt (Lap doors on outside walls only), each.....	.50
1	1	1	1	1	1	506-050	Keeper for top standing door bolt (Flush doors on outside wall only), each.....	.50
1	1	1	1	1	1	606-4	Weight, each.....	.60
1	1	1	1	1	1	606-E C	Extra Weight, each.....	.20
1	1	1	1	1	1		Package Screws and Bolts	

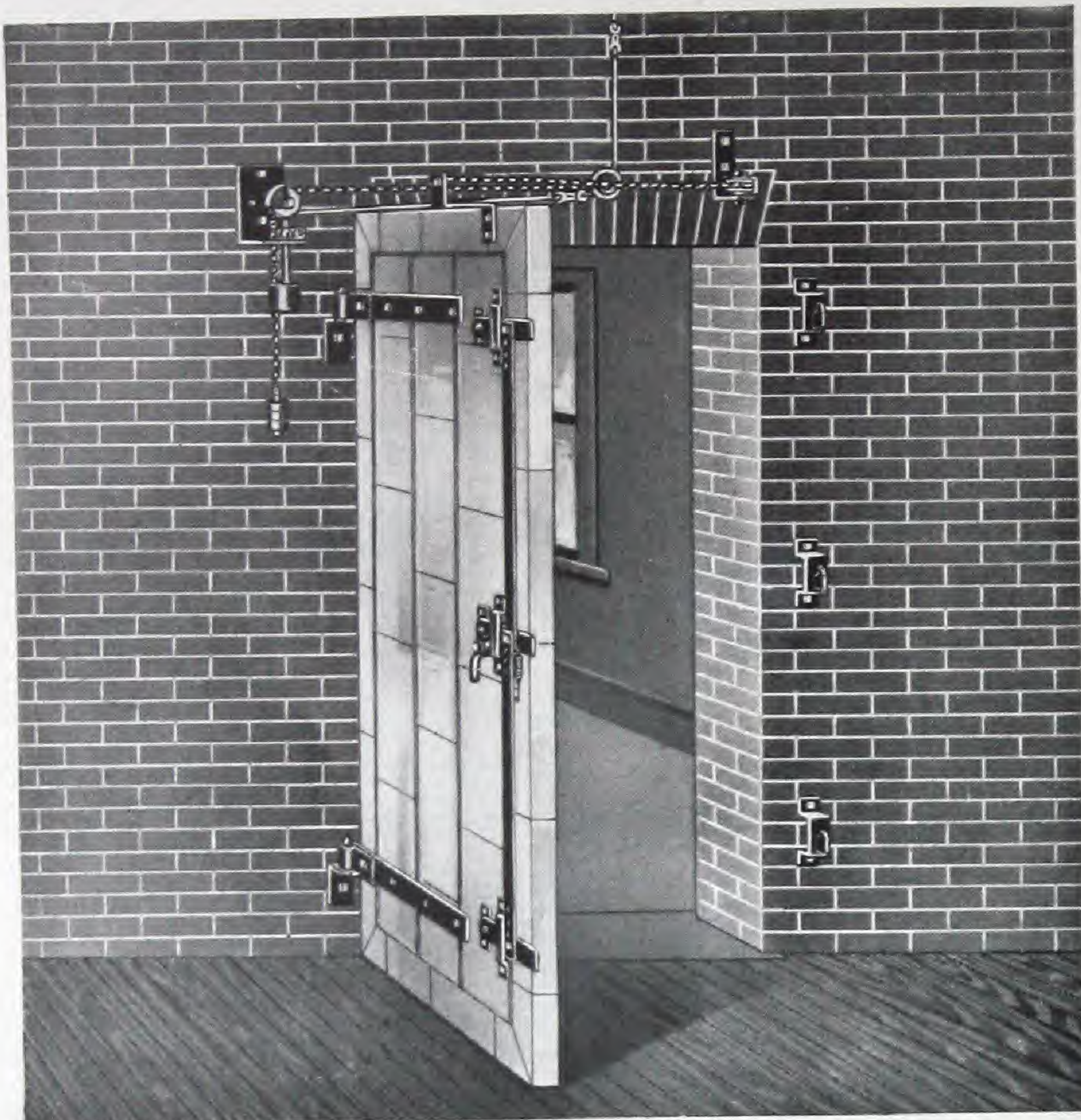
* Indicates quantity as required.

§ Quantity and length of hinges and pintels depends upon width and height of door.

406-5—up to 18" \$1.10; 21-24" \$1.40; 27-30" \$1.70; 33-36" \$2.00; 39-42" \$2.30; 45-48" \$2.60
1406-5—up to 18" \$1.47; 21-24" \$1.87; 27-30" \$2.27; 33-36" \$2.66; 39-42" \$3.07; 45-48" \$3.47

R-W Automatic Fire Door Fixtures For Single Swinging Doors

R-W No. 206-2 for Two-ply (1 3/4-inch) Tin Clad Doors.
R-W No. 206-3 for Three-ply (2 5/8-inch) Tin Clad Doors.



This swing door hardware is designed to meet the demand for a less expensive outfit than the approved Labeled No. 406 Fixture illustrated on page 64.

The fixture will meet the requirements of Underwriters in certain territories.

The automatic link and cord arrangement on this fixture extends above the opening to ceiling and when used with doors on both sides of wall same extends through so that the fusing of link on either side will cause the doors to close. When link fuses at 160 degrees Fahrenheit it releases the heavy weight, which drops onto the small weight and closes the door. The small weight merely maintains tension of chain. No. 643 Door Closer and Check (page 90) may be substituted for weight closing device if desired. Fixtures furnished for either flush or lap doors.

List Price

The following list price includes a set of fixtures complete with bolts (except pintle and keeper bolts) for attaching hardware and heavy cast washers for wall bolts.

Wall bolts will be furnished at a moderate price if thickness of wall is given.

No. 206-2 or 206-3 Fixtures complete, for doors up to 7 ft. 3 in. high (with 2 hinges), weight 75 lbs.	
Per set	\$16.00
No. 206-2 or 206-3 Fixtures complete, for doors 7 ft. 4 in. to 8 ft. 3 in. high, (with 3 hinges), weight 85 lbs. Per set	17.50
No. 206-2 or 206-3 Fixtures complete, for doors 8 ft. 4 in. to 10 ft. 4 in. high, (with 4 hinges), weight 95 lbs. Per set	19.00
*No. 206-2 or 206-3 Fixtures, automatic, deduct \$7.75 from price of complete sets listed above.	
No. 206-2 or 206-3 Automatics only, weight 34 lbs. Per set	7.75
*Use this price when No. 643 Door Check is used for automatically closing the doors.	

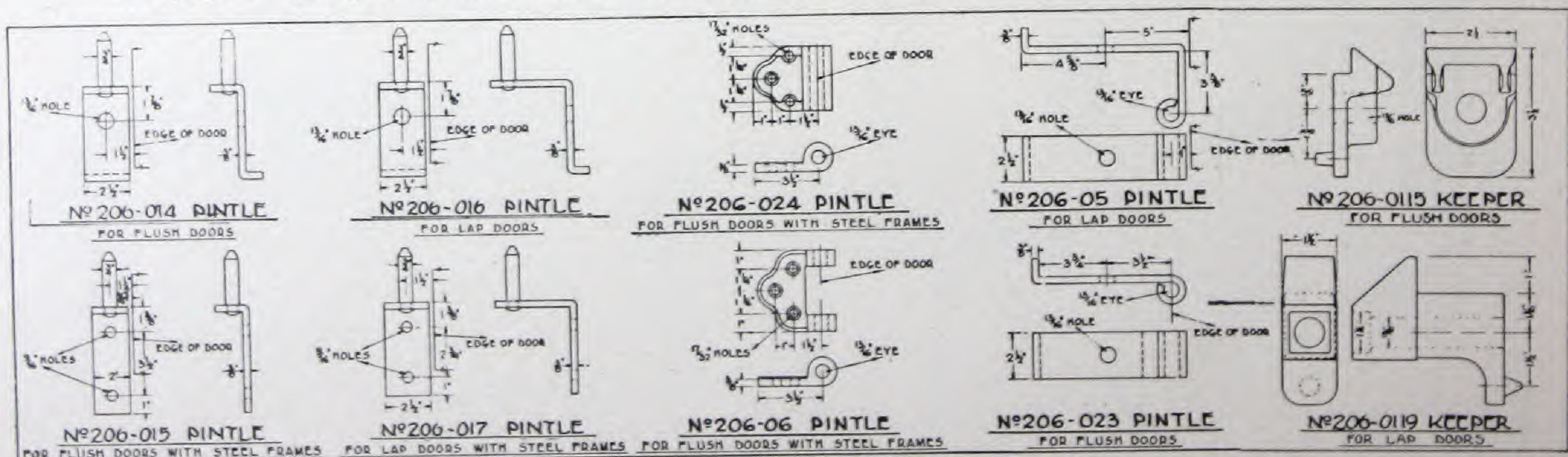
Discount.....

NOTE: This fixture requires 9 inches of headroom above top of door and 10 inches of side wall space beyond door on hinge side and 3 1/2 inches on latch side. See page 96 for special arrangements for automatics.

Frames for flush doors shown on pages 86-88. Detail of parts shown on Page 72. See pages 82-83 for R-W Standard Approved and Labeled Tin Clad Fire Doors.

Directions for Ordering.

See page 64 and give all information asked for. Types of frames shown on page 73.



R-W Automatic Fire Door Fixtures For Swinging Doors in Pairs

R-W No. 306-2, For Two-ply (1 3/4 inch) Tin Clad Doors.

R-W No. 306-3, For Three-ply (2 5/8 inch) Tin Clad Doors.

This swing door hardware is designed to meet the demand for a less expensive outfit than the Approved Labeled No. 506 illustrated on pages 66-67.

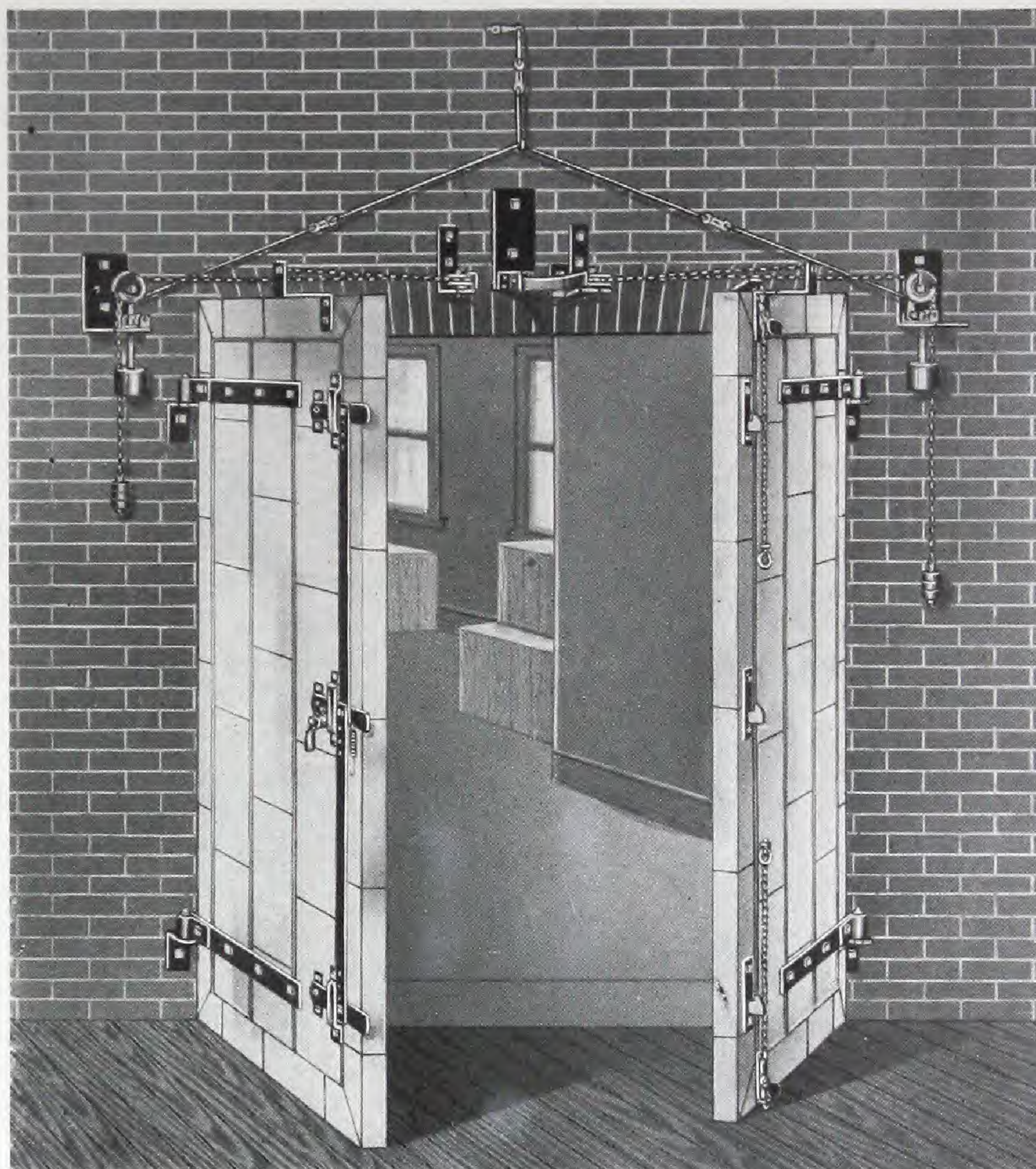
The fixture will meet the requirements of Underwriters in certain territories.

The automatic link and cord arrangement on this fixture operates in the same manner as No. 206, illustrated on opposite page. When link fuses at 160 degrees Fahrenheit it releases the heavy weight, which drops onto the small weight and closes the door. The small weight merely maintains tension of chain. No 643 Door Closer and Check (page 90) may be substituted for weight closing device if desired. The fixtures are so constructed that it is impossible for the wrong door to close first. Fixtures furnished for either flush or lap doors

List Price

The following list price includes a set of fixtures complete with bolts (except pintle and keeper bolts) for attaching hardware and heavy cast washers for wall bolts.

Wall bolts will be furnished at a moderate price if thickness of wall is given.



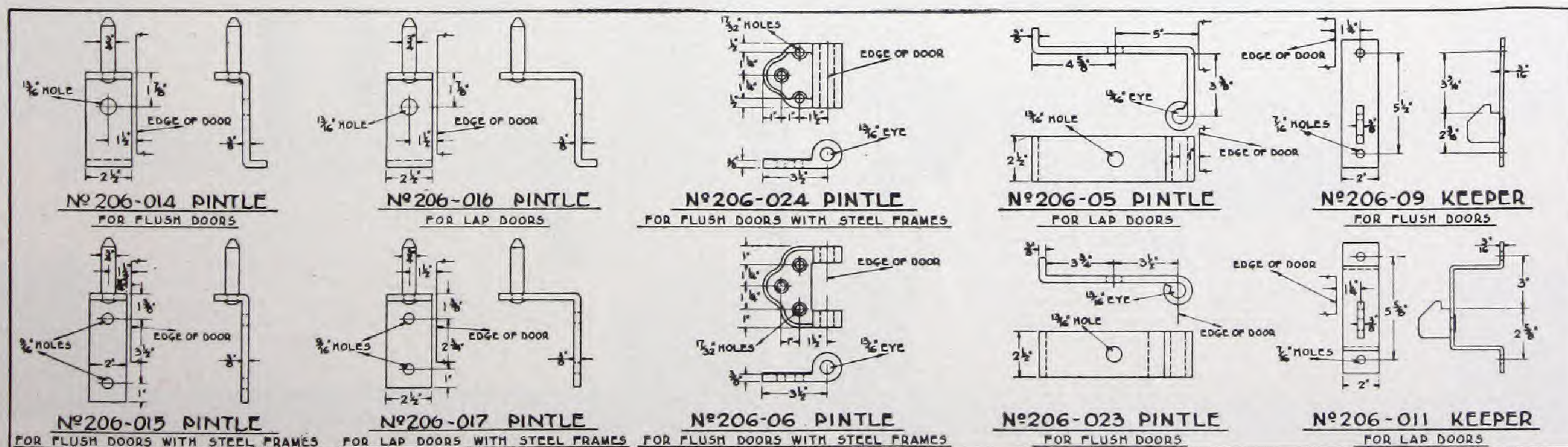
No. 306-2 or 306-3 Fixtures complete for doors up to 7 ft. 3 in. high (with 4 hinges) weight 165 lbs. Per set	\$29.00
No. 306-2 or 306-3 Fixtures complete, for doors 7 ft. 4 in. to 8 ft. 3 in. high, (with 6 hinges), weight 185 lbs. Per set	32.00
No. 306-2 or 306-3 Fixtures complete, for doors 8 ft. 4 in. to 10 ft. 4 in. high, (with 8 hinges), weight 205 lbs. Per set	35.00
*No. 306-2 or 306-3 Fixtures, less automatics, deduct \$18.00 from price of complete sets listed above.	
No. 306-2 or 306-3 Automatics only, weight 78 lbs. Per set	18.00
*Use this price when No. 643 Door Check is used for automatically closing the doors.	

Discount.....

NOTE: This fixture requires 10 inches of headroom above top of door and 10 inches of side wall space on each side of door. See page 96 for special arrangements of automatics. Frames for flush doors shown on pages 86-88. Detail of parts shown on page 72. See pages 82-83 for R-W Standard Approved and Labeled Tin Clad Fire Doors.

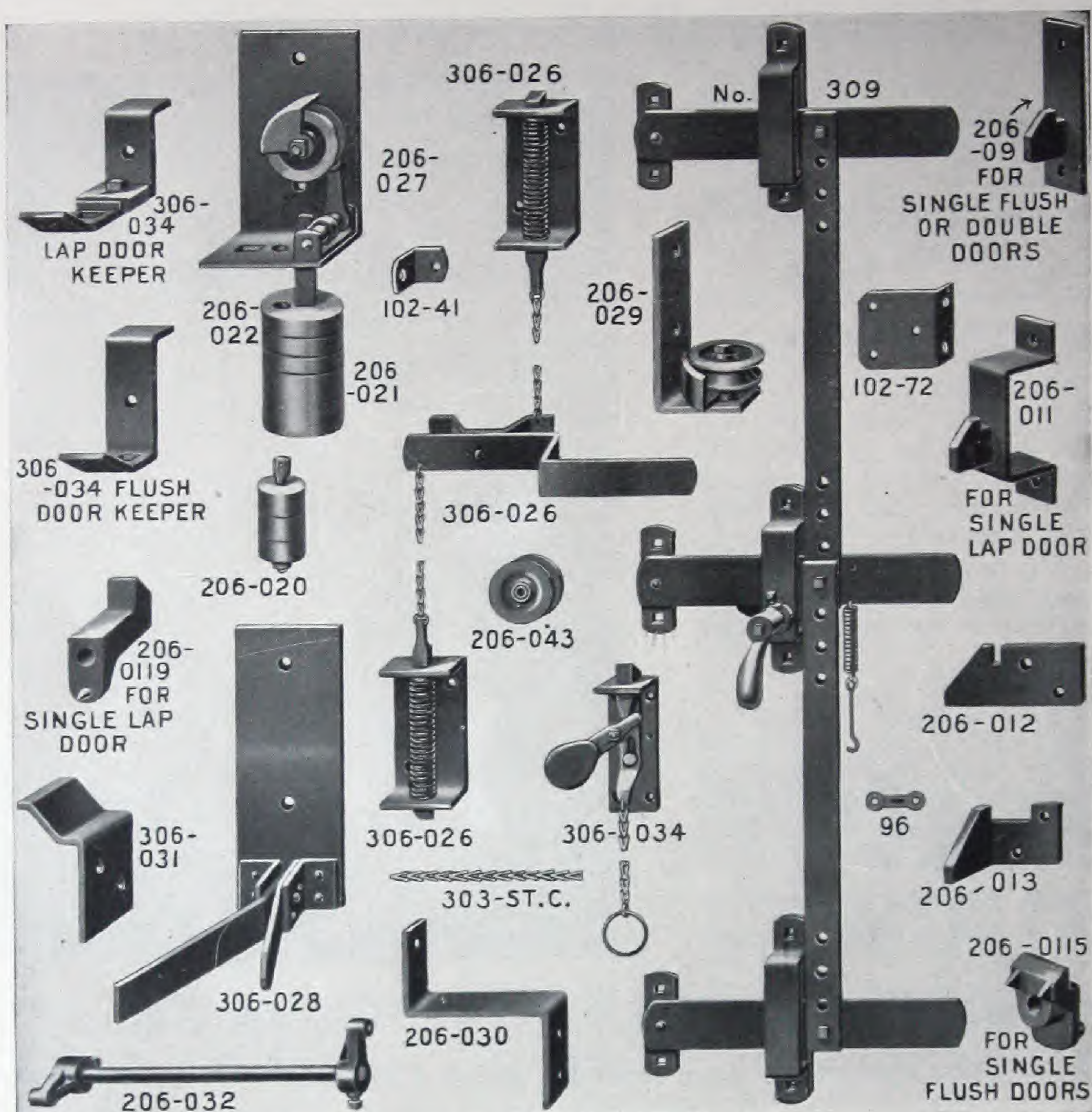
Directions For Ordering.

See page 64 and give all information asked for. Types of frames shown on page 73.

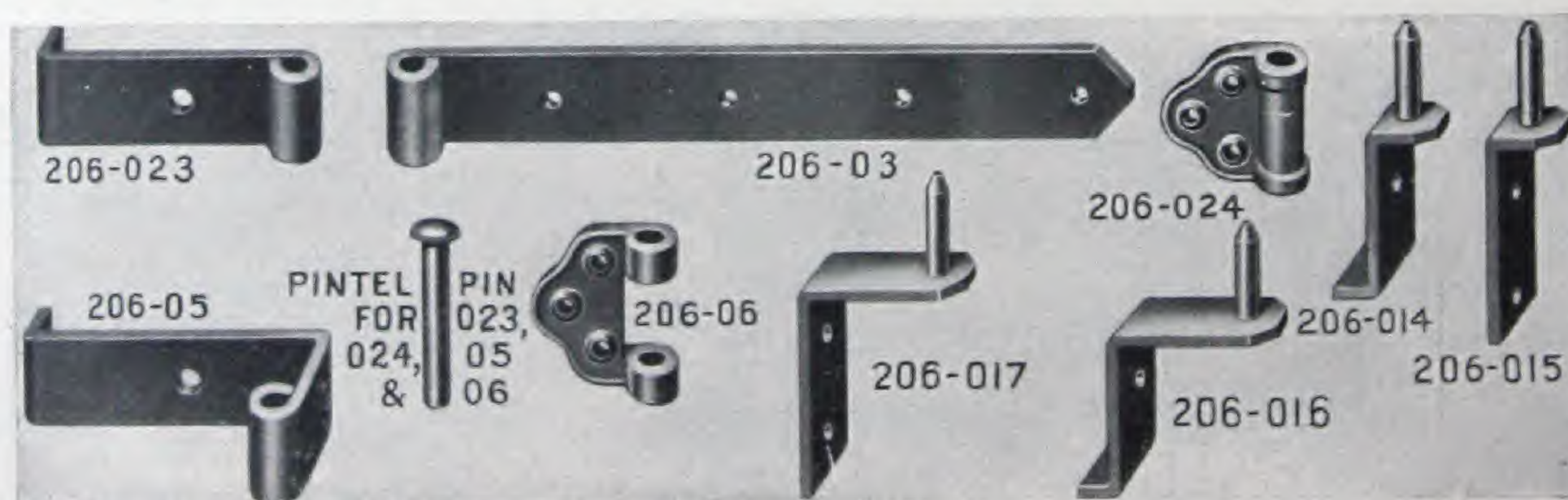




Detail of Parts for Nos. 206 and 306 Swing Fire Door Fixtures



Detail of Pintles and Hinge for Swing Fixtures





Packing List and List Price of Parts Used on Nos. 206 and 306 Swing Fire Door Fixtures

206-2	206-3	306-2	306-3	DESCRIPTION	LIST PRICE
2	2	3	3	No. 96 Fusible Link, each.....	\$.30
1	1	1	1	No. 102-41 Rope Angle, each.....	.15
*	*	*	*	No. 102-61 4" diameter Cast Washers, each.....	.15
*	*	1	1	No. 102-72 Bumper Shoe, each.....	.10
*	*	*	*	†No. 206-09 Latch Keeper (single flush doors in angle iron frames on the face of the wall or channel frames and doors in pairs), each.....	.30
*	*	*	*	§No. 206-11-2 Latch Keeper (single lap doors), each.....	.60
*	*	*	*	§No. 206-011-3 Latch Keeper (single lap doors), each.....	.60
*	*	*	*	No. 206-012 Latch Keeper (single flush doors, in rabbetted frame only), each.....	.40
*	*	*	*	†No. 206-013 Latch Keeper (single flush doors in angle iron frames on the face of the wall or channel frames), Made R & L, each..	.40
1	1	2	2	No. 206-020 Weight (3 small) with weight holder, each.....	.30
1	1	2	2	No. 206-021 Master Weight, 7 pounds, each.....	.75
1	1	2	4	No. 206-022 Extra Weight, 2 pounds, each.....	.20
1	1	2	2	No. 206-027 Pulley and Trip, complete.....	1.50
1	1	2	2	No. 206-029 Chain Pulley, each.....	1.50
1	1	2	2	No. 206-030 Chain Angle, each.....	.25
1	1	1	1	No. 206-032 Shaft and Cranks, only used when doors are on both sides of wall, each.....	.60
1	1	*	*	No. 206-043 Center Pulley with Bushing, each.....	.25
*	*	*	*	†No. 206-0115 Latch Keeper (single flush or double doors), each.....	.15
*	*	*	*	§No. 206-0119-2 Latch Keeper for two-ply (1 3/4") single lap doors, each..	.20
1 pc	1 pc	1 pc	1 pc	§No. 206-0119-3 Latch Keeper for three-ply (2 5/8") single lap doors, each..	.20
*	*	1	1	No. 303-ST Steel Sash Chain, per foot.....	.10
*	*	1	1	No. 306-026 Inside Latch (for standing door), complete, each.....	2.50
*	*	1	1	No. 306-028 Door Control, each.....	1.50
*	*	1	1	No. 306-031 Door Control Lifter, each.....	.25
1	1	1	1	No. 306-034 Top and Bottom Latch (with flush or lap door keepers) complete, (Furnished only as a substitute for No. 306-026 when so ordered), each.....	2.50
				No. 309 Triple Latch (with flush or lap door keepers), complete, each..	5.00
				Specify style of Keepers wanted. Connecting Bars made in five lengths, i.e. 24" adjustable for doors 4' 3" to 6' high. 30" adjustable for doors 5' 6" to 7' high. 36" adjustable for doors 6' 6" to 8' high. 42" adjustable for doors 7' 6" to 9' high. 48" adjustable for doors 8' 6" to 10' high. Two connecting bars are furnished with each latch. No. 649-220C 2 1/2" diameter Cast Washers used only with 206-0115 and 206-0119 Keepers, each.....	.10
1	1	1	1	Package of Screws and Bolts.	

Detail of Pintles and Hinges for Nos. 206 and 306 Swing Fire Door Fixtures Illustrated on Opposite Page

Underwriters require hinges to cover three-fourths the width of door. All hinge straps are made of 2 1/2 x 3/8 inch steel. Doors up to 7' 3" high require 2 hinges; 7' 4" to 8' 3" high require 3 hinges, and doors 8' 4" to 10' 4" high require 4 hinges.

No. 206-03 Hinge Straps, 12", per pair.....	\$1.00
No. 206-03 Hinge Straps, 15", per pair.....	1.00
No. 206-03 Hinge Straps, 18", per pair.....	1.00
No. 206-03 Hinge Straps, 21", per pair.....	1.20
No. 206-03 Hinge Straps, 24", per pair.....	1.20
No. 206-03 Hinge Straps, 30", per pair.....	1.50
No. 206-03 Hinge Straps, 36", per pair.....	1.80
No. 206-03 Hinge Straps, 42", per pair.....	2.10
No. 206-03 Hinge Straps, 48", per pair.....	2.40
No. 206-05-2 Hinge Pintles with pintle pins (for two-ply lap doors only), per pair.....	1.20
No. 206-05-3 Hinge Pintles with pintle pins (for three-ply lap doors only), per pair.....	1.20
No. 206-06 Hinge Pintles with pintle pins (flush doors, angle iron frames), per pair.....	1.20
No. 206-014 Hinge Pintles (Flush doors, masonry walls), per pair.....	1.00
No. 206-015 Hinge Pintles for flush doors with angle iron or channel iron frames, per pair.....	1.00
No. 206-016-2 Hinge Pintles for two-ply (1 3/4") lap doors, masonry walls, per pair.....	1.25
No. 206-016-3 Hinge Pintles for three-ply (2 5/8") lap doors, masonry walls, per pair.....	1.25
No. 206-017-2 Hinge Pintles for two-ply (1 3/4") lap doors with angle iron or channel iron frames, per pair.....	1.25
No. 206-017-3 Hinge Pintles for three-ply (2 5/8") lap doors with angle iron or channel iron frames, per pair....	1.25
No. 206-023 Hinge Pintles with pintle pins (flush doors) per pair.....	1.20
No. 206-024 Hinge Pintles with pintle pins (flush doors, angle iron frames, per pair.....	1.80

* Quantity as required.

§ Unless otherwise specified No. 206-011 will be furnished for lap doors.

† Unless otherwise specified No. 206-09 will be furnished for flush doors.

Discount.....

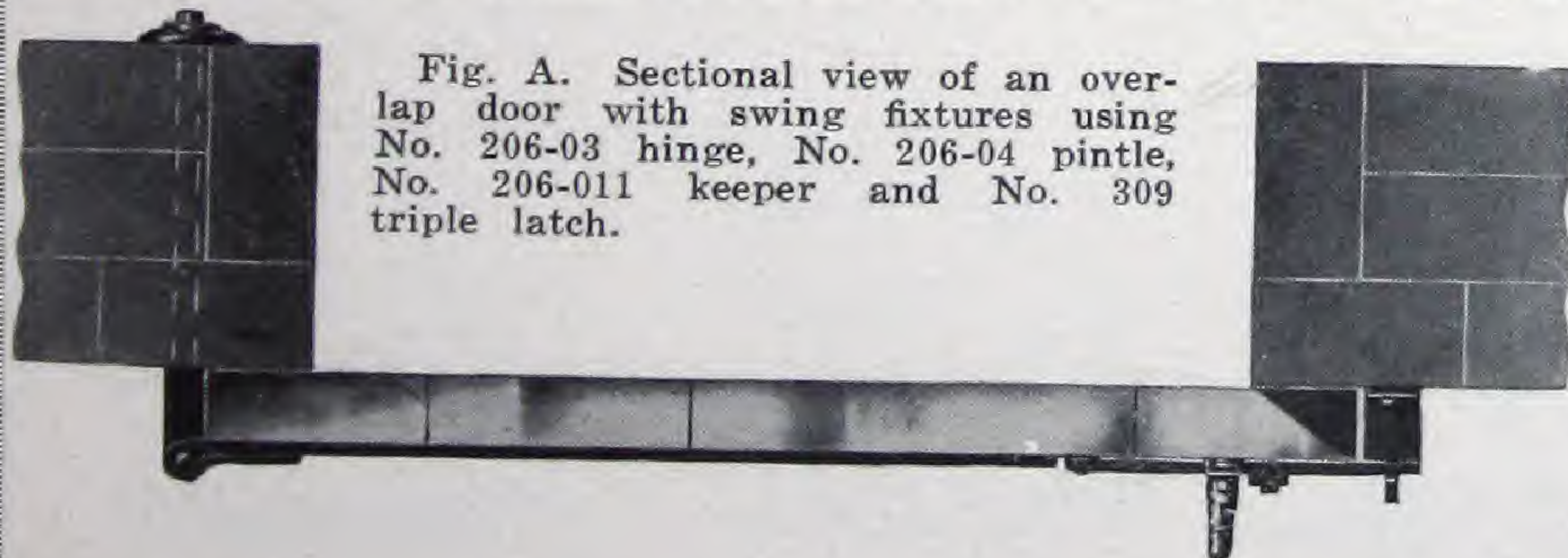


Fig. A. Sectional view of an overlap door with swing fixtures using No. 206-03 hinge, No. 206-04 pintle, No. 206-011 keeper and No. 309 triple latch.

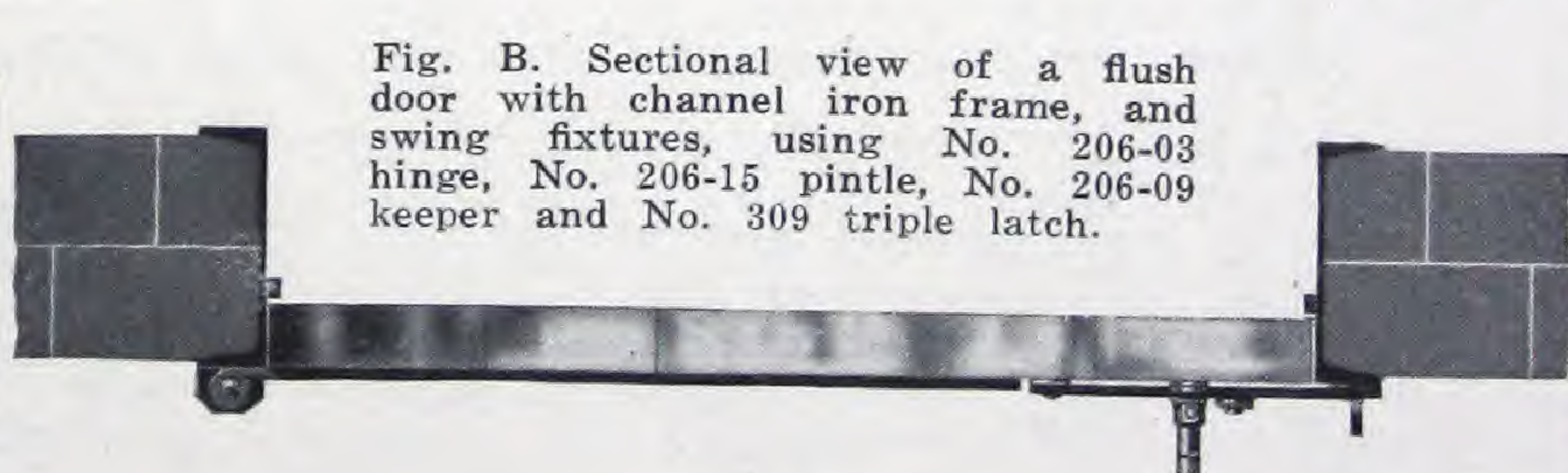


Fig. B. Sectional view of a flush door with channel iron frame, and swing fixtures, using No. 206-03 hinge, No. 206-15 pintle, No. 206-09 keeper and No. 309 triple latch.

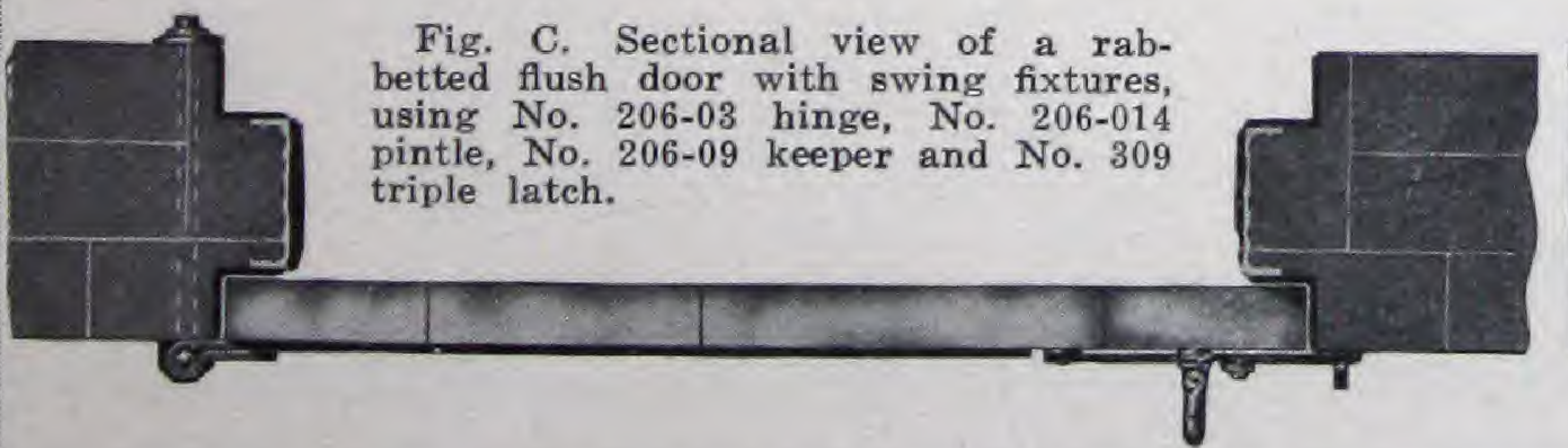


Fig. C. Sectional view of a rabbetted flush door with swing fixtures, using No. 206-03 hinge, No. 206-014 pintle, No. 206-09 keeper and No. 309 triple latch.

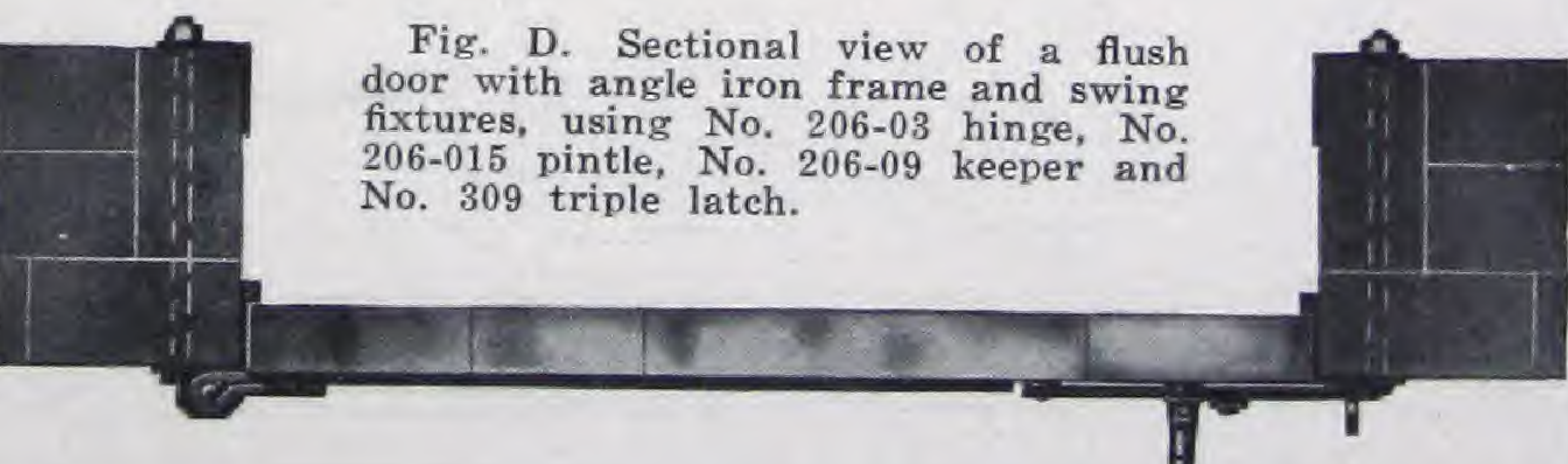


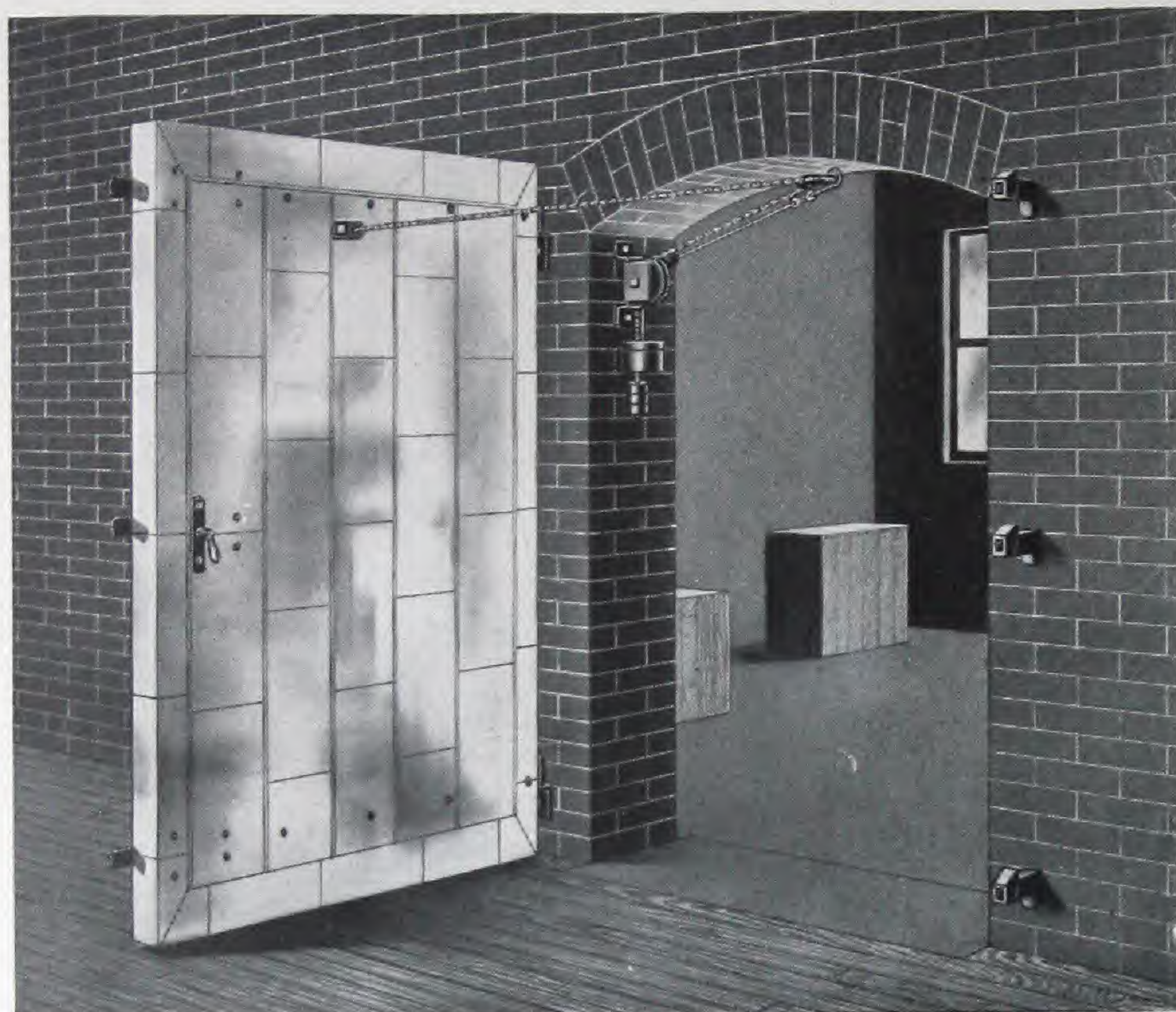
Fig. D. Sectional view of a flush door with angle iron frame and swing fixtures, using No. 206-03 hinge, No. 206-015 pintle, No. 206-09 keeper and No. 309 triple latch.



R-W Automatic Fire Door Fixtures For Single Swinging Doors

R-W No. 606-2 for Two-ply (1 3/4-inch) Tin Clad Doors.

R-W No. 606-3 for Three-ply (2 5/8-inch) Tin Clad Doors.



This swing door hardware is designed to meet the demand for an inexpensive outfit and will meet the requirements of Underwriters in certain territories.

This fixture is particularly adaptable where conditions do not permit the attaching of pulleys on the wall on account of insufficient headroom and lack of space between door and adjoining wall. When link fuses at 160 degrees Fahrenheit it releases the heavy weight, which drops onto the small weight and closes the door. The small weight merely maintains tension of chain. No. 643 Door Closer and Check (page 90) may be substituted for weight closing device if desired.

To conform strictly to Underwriters' requirements, triple bar latch is always furnished.

Single bar latch can be furnished on application. Fixtures furnished for either flush or lap doors.

List Price

The following list price includes a set of fixtures complete, with bolts (except pintle and keeper bolts), for attaching hardware and heavy washers for wall bolts.

Wall bolts will be furnished at a moderate price if thickness of wall is given.

- *No. 606-2 or 606-3 Fixtures complete for doors up to 7 ft. 3 in. high (with 2 hinges), weight 70 lbs. Per set \$12.00
- *No. 606-2 or 606-3 Fixtures complete for doors 7 ft. 4 in. to 8 ft. 3 in. high (with 3 hinges), weight 80 lbs. Per set 14.00
- *No. 606-2 or 606-3 Fixtures complete for doors 8 ft. 4 in. to 10 ft. 4 in. high, (with 4 hinges), weight 90 lbs. Per set 16.00
- †*No. 606-2 or 606-3 Fixtures, less automatics, deduct \$4.00 from price of complete sets listed above.
- No. 606-2 or 606-3 Automatics only, weight 26 lbs. Per set 4.00
- *If single bar latch is desired instead of triple latch, deduct \$4.00 from list prices above.
- †Use this price when No. 643 Door Check is used for automatically closing the doors.

Discount.....

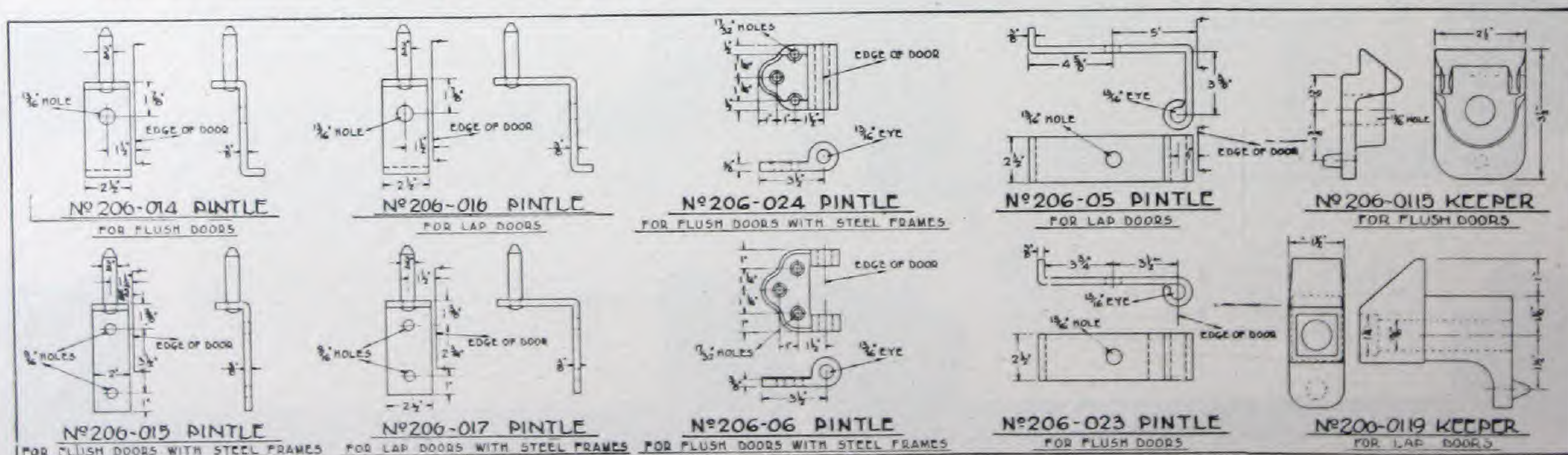
Directions for Ordering

Give all information asked for on page 64. Types of frames shown on page 73.

NOTE: This fixture requires no headroom above top of door and only 3 1/2 inches of side wall space on each side of door.

Detail of parts shown on page 76. See pages 82-83 for R-W Standard Approved and Labeled Tin Clad Fire Doors.

Frames for flush doors are shown on pages 86-88.



R-W Automatic Fire Door Fixtures For Swinging Doors in Pairs

R-W No. 706-2 for Two-ply (1 3/4-inch) Tin Clad Doors.

R-W No. 706-3 for Three-ply (2 5/8-inch) Tin Clad Doors.

This swing door hardware is designed to meet the demand for an inexpensive outfit and will meet the requirements of Underwriters in certain territories.

This fixture is particularly adaptable where conditions do not permit the attaching of pulleys on the wall on account of insufficient headroom and lack of space between door and adjoining wall. The automatic link and cord arrangement is the same as No. 606 illustrated on opposite page, excepting that it is for double doors. Fixture is so constructed that it is impossible for the wrong door to close first. To conform strictly to Underwriters' requirements, triple bar latch is always furnished. Single bar latch can be furnished on application. Fixtures furnished for either flush or lap doors.

List Price

The following list price includes a set of fixtures complete, with bolts (except pintle bolts), for attaching hardware, and heavy washers for wall bolts.

Wall bolts will be furnished at a moderate price if thickness of wall is given.

- *No. 706-2 or 706-3 Fixtures complete, for doors up to 7 ft. 3 in. high, (with 4 hinges), weight 133 lbs.
Per set \$20.00
- *No. 706-2 or 706-3 Fixtures complete, for doors 7 ft. 4 in. to 8 ft. 3 in. high (with 6 hinges), weight 153 lbs.
Per set 22.50
- *No. 706-2 or 706-3 Fixtures complete, for doors 8 ft. 4 in. to 10 ft. 4 in. high (with 8 hinges), weight 173 lbs. Per set..... 25.00
- †* No. 706-2 or 706-3 Fixtures, less automatics, deduct \$10.00 from the price of complete sets listed above.
- No. 706 Automatics only, weight 62 lbs. Per set..... 10.00

If top and bottom bolts for standing doors are desired, specify No. 306-026 inside latch and add \$2.50 to list price.

*If single bar latch is desired instead of triple latch, deduct \$4.00 from list prices above.

†Use this price when No. 643 Door Check is used for automatically closing the doors.

Discount.....

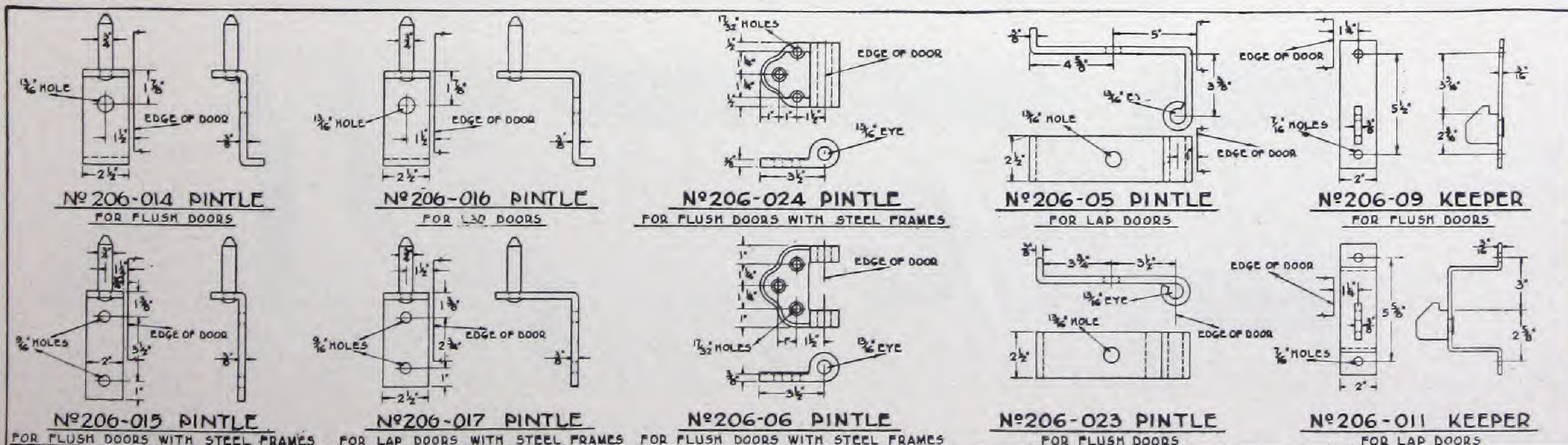
Directions for Ordering

Give all dimensions asked for on page 66 and state if top and bottom bolt is required. Types of frames shown on page 73.

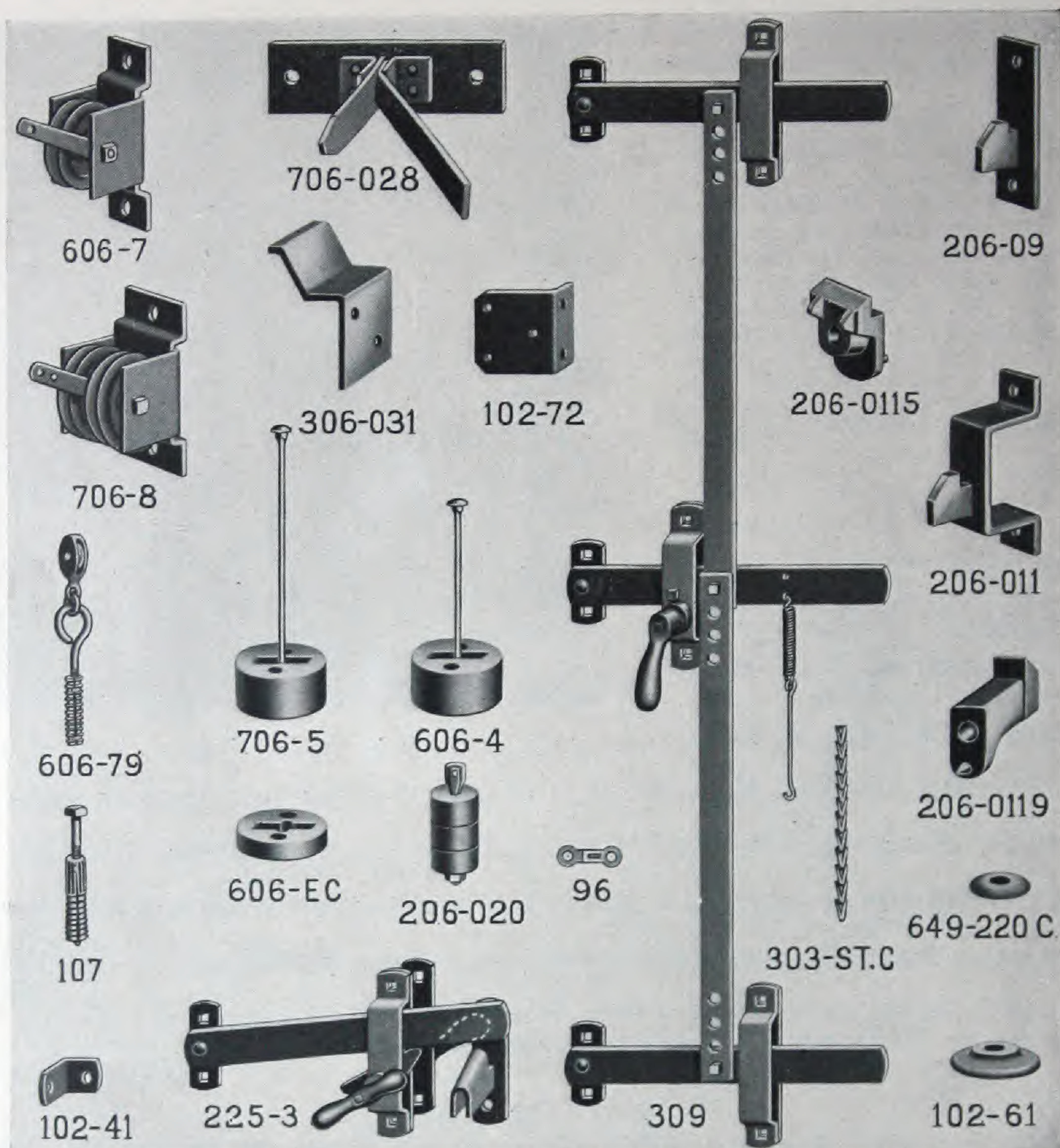
NOTE: This fixture requires 3 1/2 inches headroom above top of door and only 3 1/2 inches of side wall space on each side of door.

Frames for flush doors are shown on page 86-88.

Detail of parts shown on page 76. See pages 82-83 for R-W Standard Approved and labeled Tin Clad Fire Doors.

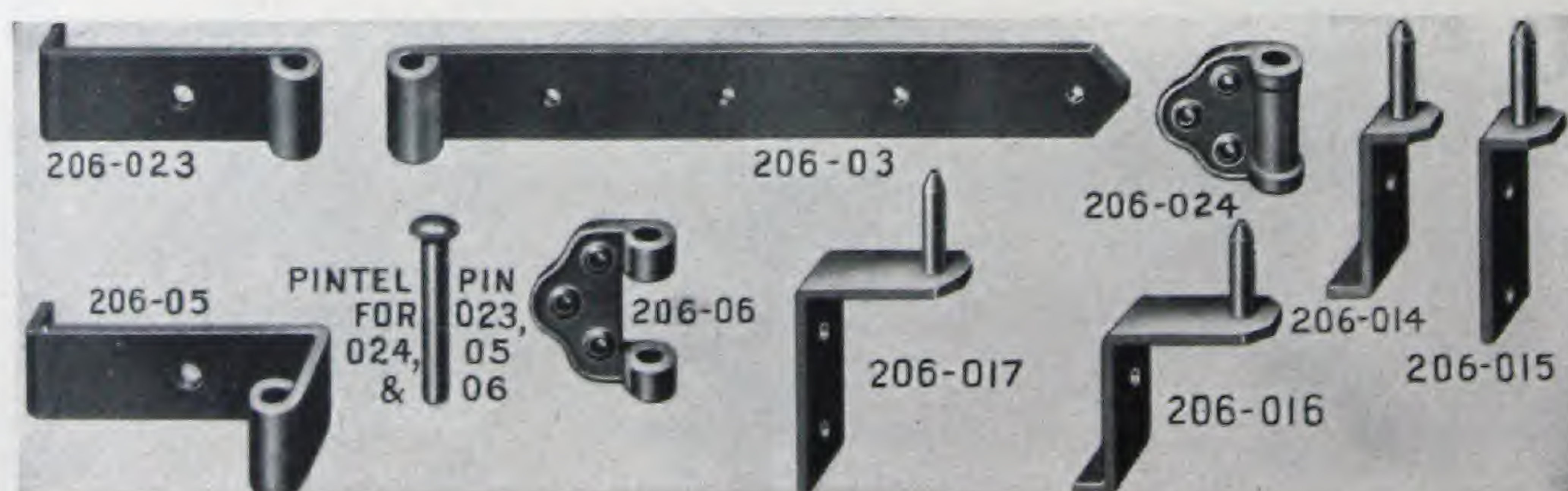


Detail of Parts for Nos. 606 and 706 Swing Fire Door Fixtures



NOTE—Keeper shown with No. 225-3 Latch is used for doors in pairs. No. 206-0115 used for single doors.

Detail of Pintels and Hinges for Swing Fixtures





Packing List and List Price of Parts Used on Nos. 606 and 706 Swing Fire Door Fixtures

606-2	606-3	706-2	706-3	DESCRIPTION	List Price
1	1	1	1	No. 96 Fusible Link, each.....	\$.30
1	1	2	2	No. 102-41 Rope Angle, each.....	.15
*	*	*	*	No. 102-61 Cast Washers (as required), each.....	.15
..	..	1	1	No. 102-72 Bumper Shoe, each.....	.10
1 pc	1 pc	1 pc	1 pc	No. 102-SC Sash Cord, per foot.....	.05
..	..	3	3	No. 206-09 Latch Keeper for doors in pairs, each.....	.30
3	..	..	..	§No. 206-011-2 Latch Keeper for two-ply single lap doors, ea	.60
..	3	..	..	§No. 206-011-3 Latch Keepers for three-ply single lap	
				doors, each.....	.60
1	1	2	2	No. 206-020 Weight (3 small) with weight holder, complete	.30
3	3	..	..	No. 206-0115 Latch Keeper for single flush doors, each.....	.15
3	..	..	..	§No. 206-0119-2 Latch Keeper for two-ply single lap	
..	3	..	..	doors, each.....	.20
				§No. 206-0119-3 Latch Keeper for three-ply single lap	
				doors, each.....	.20
1	1	1	1	†No. 225-3 Single Latch, each.....	1 00
1 pc	1 pc	1 pc	1 pc	No. 303-STC Sash Chain, per foot.....	.10
1	1	1	1	†No. 309 Triple Latch (with flush or lap door keepers)	
				complete.....	5.00
1	1	..	..	No. 606-4 Weight, 5½ pounds, each.....	.60
1	1	..	..	No. 606-7 Pulley and Trip, complete.....	2.00
1	1	2	2	No. 606-79 Screw Eye and Pulley, complete.....	.25
1	2	2	4	No. 606-EC Extra Weights, each.....	.20
3	3	..	..	No. 649-220C 2½" diameter Cast Washers for No.	
..	..	1	1	206-0115 or No. 206-0119 Keepers, each.....	.10
..	..	1	1	No. 706-8 Pulley and Trip, complete.....	2.00
..	..	1	1	No. 706-5 Weight, each.....	.60
..	..	1	1	No. 706-028 Door Control, each.....	1 50
..	..	1	1	No. 306-031 Door Control Lifter, each.....	.25
1	1	1	1	Package of Screws and Bolts.	

Detail of Pintles and Hinges for Nos. 606 and 706 Swing Fire Door Fixtures

No. 206-03 Hinge Straps, 12", per pair.....	1.00
No. 206-03 Hinge Straps, 15", per pair.....	1.00
No. 206-03 Hinge Straps, 18", per pair.....	1.00
No. 206-03 Hinge Straps, 21", per pair.....	1.20
No. 206-03 Hinge Straps, 24", per pair.....	1.20
No. 206-03 Hinge Straps, 30", per pair.....	1.50
No. 206-03 Hinge Straps, 36", per pair.....	1.80
No. 206-03 Hinge Straps, 42", per pair.....	2.10
No. 206-03 Hinge Straps, 48", per pair.....	2.40
No. 206-05-2 Hinge Pintles with pintle pins (for two-ply lap door only) per pair.....	1.20
No. 206-05-3 Hinge Pintles with pintle pins (for three-ply lap door only), per pair.....	1.20
No. 206-06 Hinge Pintles with pintle pins (flush doors, angle iron frames), per pair.....	1.20
No. 206-014 Hinge Pintles (Flush doors, masonry walls), per pair.....	1.00
No. 206-015 Hinge Pintles for flush doors with angle iron or channel iron frames, per pair..	1.00
No. 206-016-2 Hinge Pintles for two-ply (1¾") lap doors, masonry walls, per pair.....	1.25
No. 206-016-3 Hinge Pintles for three-ply (2½") lap doors, masonry walls, per pair.....	1.25
No. 206-017-2 Hinge Pintles for two-ply (1¾") lap doors with angle iron or channel	
iron frames, per pair.....	1.25
No. 206-017-3 Hinge Pintles for three-ply (2½") lap doors with angle iron or channel	
iron frames, per pair.....	1.25
No. 206-023 Hinge Pintles with pintle pins (flush doors) per pair.....	1.20
No. 206-024 Hinge Pintles with pintle pins (flush doors, angle iron frames) per pair.....	1.80

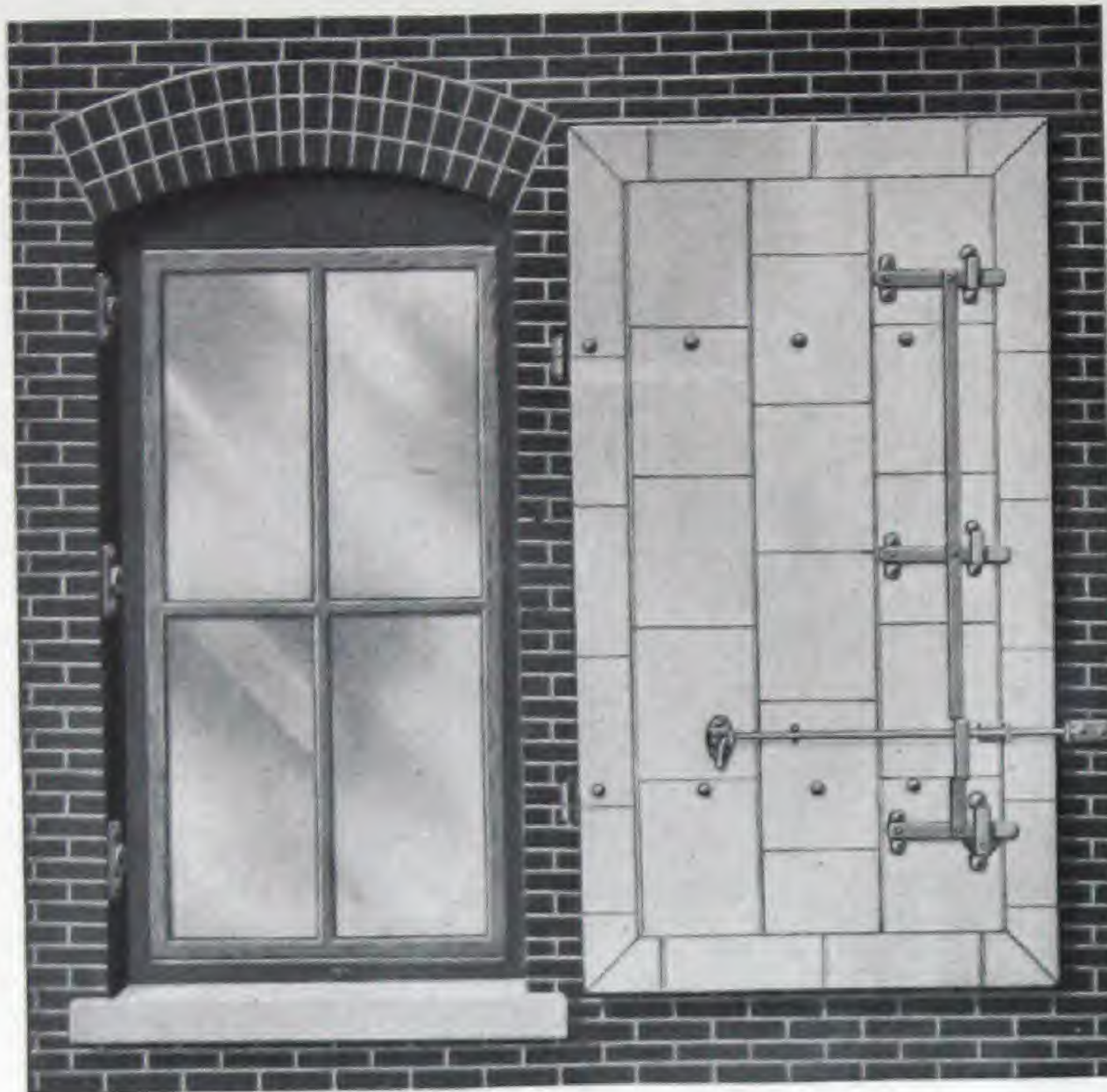
Connecting bars made in five lengths, i. e., 24" adjustable for doors 4' 3" to 6' high; 30" adjustable for doors 5' 6" to 7' high; 36" adjustable for doors 6' 6" to 8' high; 42" adjustable for doors 7' 6" to 9' high; 48" adjustable for doors 8' 6" to 10' high. Two connecting bars are furnished with each latch.

* Quantity as required.

†No. 309 Triple Latch is packed regularly but No. 225-3 single latch will be substituted when so ordered.
§No. 206-0119 Keepers are furnished regularly but No. 206-011 will be substituted when so ordered.

R-W Fire Shutter Fixtures for Single Swinging Doors

R-W No. 307 for Two-ply (1 3/4-inches) Tin Clad Shutters.
R-W No. 1307 for "FyeR-Wall" Sheet Metal Shutters.



R-W No. 307 Fire Shutter Fixtures.

Fire Shutters are one of the greatest protections against fire that can be applied to a building, and all buildings within the reach of a possible fire from other buildings should be equipped with fire shutters. These fixtures designed to meet the requirements of Underwriters, for protecting window openings.

The following list price includes a set of fixtures complete, and all bolts for attaching hardware to shutters.

Wall bolts for pintles will be furnished at a moderate price if thickness of wall is given.

List Price

	Nos. 307 and 1307	Nos. 407 and 1407
Fixtures complete, for shutters up to 7 ft. 3 in. high, (with double latch). Per set.....	\$6.50	10.80
Fixtures complete, for shutters 7 ft. 4 in. to 10 ft. 3 in. high, (with triple latch). Per set.....	8.90	14.25
Discount.....		

NOTE: Underwriters require three hinges on shutters over 7 feet 4 inches in height and to cover three-fourths of the width of each shutter.

R-W Fire Shutter Fixtures For Swinging Shutters in Pairs

R-W No. 407 for Two-ply (1 3/4-inch) Tin Clad Shutters.
R-W No. 1407 for "FyeR-Wall" Sheet Metal Shutters.

Directions for Ordering

First, state number of openings.

Second, width and height of opening (mention width first and do not say shutters when you mean openings).

Third, are shutters to lap wall or to fit flush in masonry opening?

Fourth, are openings square top or arched top?

Fifth, are shutters to be two-ply (1 3/4-inch), Tin Clad or "FyeR-Wall sheet metal?

Sixth, thickness of wall when wall bolts are required.

Seventh, see pages 82-85 for R-W Standard Approved and Labeled Tin Clad shutters and R-W "FyeR-Wall sheet metal shutters.

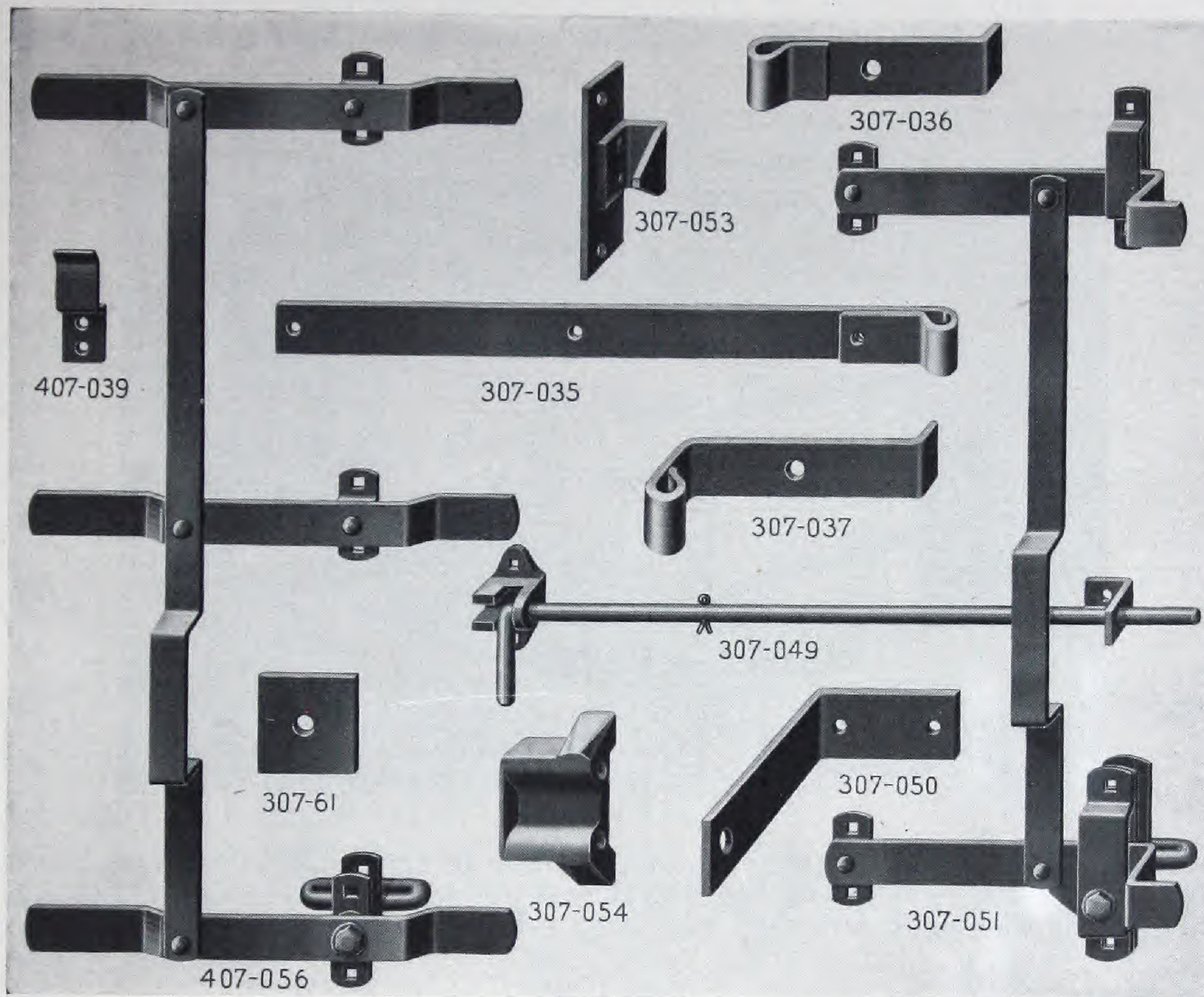
Eighth, Shutter fixtures suitable for Merchant and Evans shutters furnished when required.

NOTE: Unless otherwise specified on order, fixtures complete will be sent for tin clad shutters 1 3/4-inch thick. Detail of parts shown on opposite page.



R-W No. 407 Fire Shutter Fixtures.

Detail of Parts for Nos. 307 and 407 R-W Swinging Fire Shutter Fixtures



List Price

Detail of Parts for Nos. 307 and 407 Swing Fire Shutter Fixtures
Illustrated Above

Underwriters require hinges to cover three-fourths the width of shutter. Hinge straps are made of $1\frac{1}{2} \times \frac{5}{16}$ -inch steel

Number	DESCRIPTION	List Price
307-035	Hinge Straps, 18 inches or under, per pair.....	\$1.10
307-035	Hinge Straps, 24 inches long, per pair.....	1.20
307-035	Hinge Straps, 30 inches long, per pair.....	1.30
307-035	Hinge Straps, 36 inches long, per pair.....	1.40
307-036	Pintle with pintel pin (for flush shutters) per pair.....	1.40
307-037	Pintle with pintel pin (for lap shutters) per pair.....	1.00
307-049	Stay Rod, each.....	1.00
307-050	Stay Rod Keeper, each.....	.50
307-150	Double Latch, with No. 307-053 or 054 Keepers complete, each.....	2.50
307-052	Triple Latch, with No. 307-053 or 054 Keepers complete, each.....	3.50
307-053	Keeper (for single lap shutter) each.....	.60
307-054	Keeper (for single flush shutter) each.....	.60
307-61	Square Steel Washer for pintle bolts, each.....	.15
407-039	Latch Bar Keeper (double shutter) each.....	.30
407-055	Double Latch, with No. 407-039 Keeper (double lap or flush shutter) complete, each..	2.50
407-056	Triple Latch, with No. 407-039 Keeper (double lap or flush shutter) complete, each..	3.50

Discount.....

Note—Always specify by number and state size of shutter.

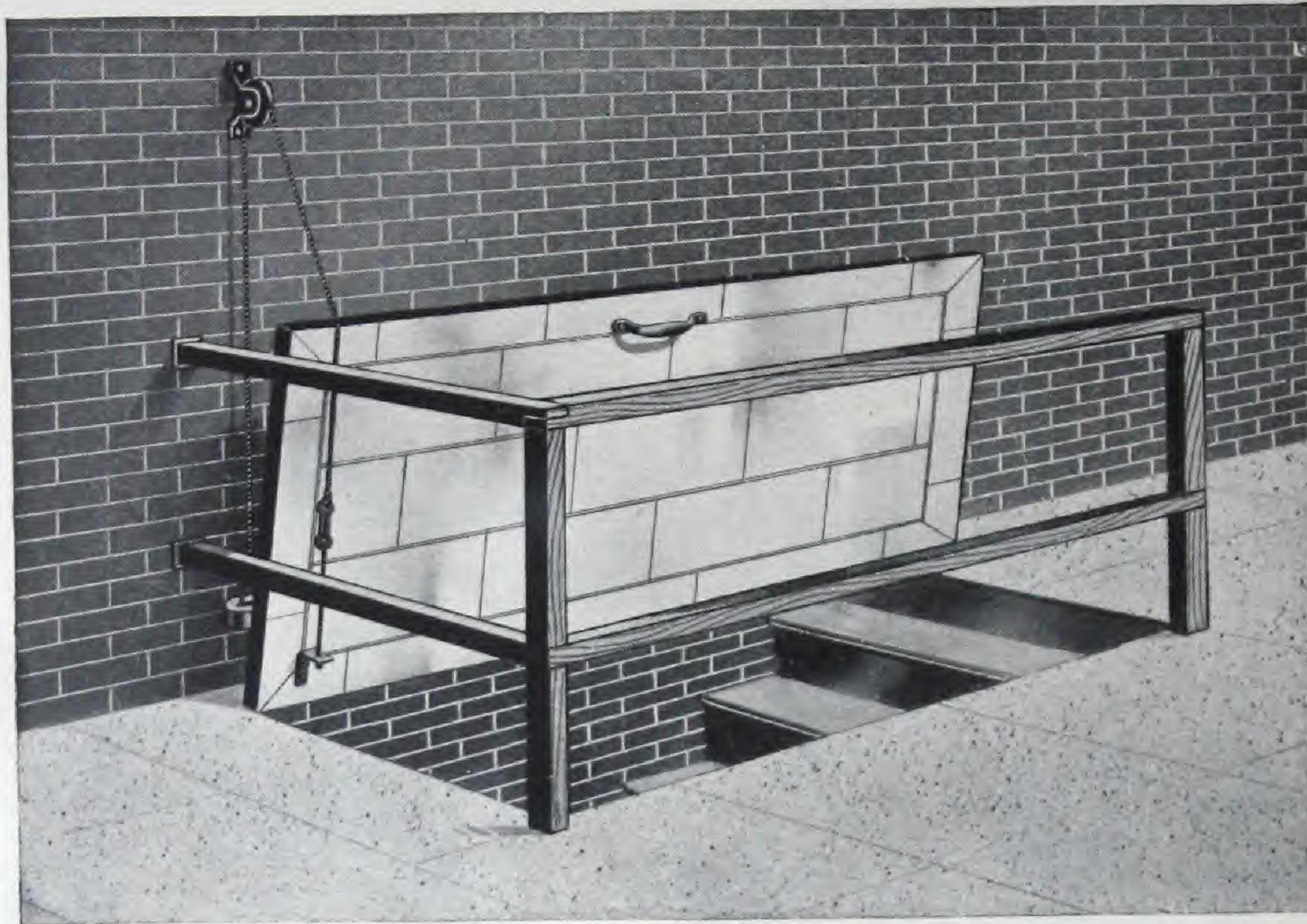


R-W Automatic Fire Door Fixtures For Single Trap Doors

R-W No. 212-2 for Two-ply (1 3/4-inch) Tin Clad Doors.

R-W No. 212-3 for Three-ply (2 5/8-inch) Tin Clad Doors.

R-W No. 1212 for "FyeR-Wall" Sheet Metal Doors.



This fixture specified and endorsed by Underwriters is applicable to trap fire doors. When open, the door is counter balanced by the weight and when link fuses door closes by gravity. Twenty-one pounds of weight furnished with each set.

List Price

The following list price includes a set of fixtures complete, consisting of rope pulleys, weights, sash cord and all bolts for attaching hardware to door and wall.

Hinges are not included, but will be furnished at a moderate price if width and thickness of door is given and the material of which same is constructed.

No. 212 or No. 1212 Fixtures complete with No. 212-21 double pulley (less hinges), weight 37 lbs. Per set...\$5.50

Discount.....

Directions for Ordering

State width, height and thickness of door, also material of which same is constructed, and weight.

When hinges are desired, give above dimensions and state if same are to be attached to floor or side wall, and in either case the material of which same is constructed.



Number	Description	List Price
71-2	Steel Handle, each.....	\$.15
96	Fusible Link, each.....	.30
102-41	Rope Angle, each.....	.15
102-91	Weight Holder, each.....	.15
102-99-1	Light Weight, 3 pounds, each.....	.25
102-99-2	Heavy Weight, 9 pounds, each.....	.75
102-SC	No. 7 Sash Cord, per foot.....	.05
107	Expansion Bolt, 1/2x5 inches, each..	.20
212-21	Double Pulley, each.....	1.50
212-22	Back Stop for Door, each.....	.50
212-21 1/2	Single Pulley (discontinued).....	—
303-STC	No. 2 Steel Sash Chain, per foot....	.10

Discount.....

NOTE: Always specify by number and state size of door.



R-W Approved Fire Doors

The Richards-Wilcox Manufacturing Company has the best of facilities for the manufacture of standard approved and labeled Fire Doors. The tin clad fire door has been in use a great many years and has been proven a satisfactory fire retardant so long as it is unimpaired by reason of damage to the tin covering or dry rotting of the wood core.

The "FyeR-Wall" Sheet Metal Door is a later development. It will stand a long continued exposure to fire and a high resistance to damage from ordinary use.

The National Board of Fire Underwriters classify openings in walls and partitions in five divisions.

Class A—Openings in division walls between separate buildings or separate sections of buildings (i. e. in fire walls.)

Class B—Openings in enclosures to vertical communications thru buildings. (i. e. vertical shafts).

Class C—Openings in corridors and room partitions.

Class D—Openings in exterior walls subject to severe fire exposure.

Class E—Openings in exterior walls subject to moderate fire exposure.

R-W Standard Approved Tin Clad Fire Doors and Shutters and R-W Approved "FyeR-Wall" Sheet Metal Doors shown on pages 82-85 are approved for protection of openings listed above.

Table for Computing the Area of Fire Doors.

Door Width		Add for Incline Top Square Feet	Door Width		Add for Incline Top Square Feet
Feet Inches	Feet in Decimals		Ft. in.	Feet in Decimals	
2- 0	2.000	.125	7- 6	7.500	3.516
2- 1	2.083	.271	7- 7	7.583	3.594
2- 2	2.167	.393	7- 8	7.667	3.674
2- 3	2.250	.316	7- 9	7.750	3.754
2- 4	2.333	.340	7-10	7.833	3.835
2- 5	2.417	.365	7-11	7.917	3.917
2- 6	2.500	.391	8- 0	8.000	4.000
2- 7	2.583	.417	8- 1	8.083	4.084
2- 8	2.667	.445	8- 2	8.167	4.169
2- 9	2.750	.473	8- 3	8.250	4.254
2-10	2.833	.502	8- 4	8.333	4.340
2-11	2.917	.532	8- 5	8.417	4.427
3- 0	3.000	.563	8- 6	8.500	4.516
3- 1	3.083	.594	8- 7	8.583	4.604
3- 2	3.167	.627	8- 8	8.667	4.695
3- 3	3.250	.666	8- 9	8.750	4.785
3- 4	3.333	.694	8-10	8.833	4.877
3- 5	3.417	.729	8-11	8.917	4.969
3- 6	3.500	.766	9- 0	9.000	5.063
3- 7	3.583	.802	9- 1	9.083	5.157
3- 8	3.667	.840	9- 2	9.167	5.252
3- 9	3.750	.879	9- 3	9.250	5.348
3-10	3.833	.918	9- 4	9.333	5.444
3-11	3.917	.959	9- 5	9.417	5.542
4- 0	4.000	1.000	9- 6	9.500	5.641
4- 1	4.083	1.042	9- 7	9.583	5.740
4- 2	4.167	1.085	9- 8	9.667	5.841
4- 3	4.250	1.129	9- 9	9.750	5.941
4- 4	4.333	1.174	9-10	9.833	6.043
4- 5	4.417	1.219	9-11	9.917	6.147
4- 6	4.500	1.266	10- 0	10.000	6.250
4- 7	4.583	1.333	10- 1	10.083	6.354
4- 8	4.667	1.361	10- 2	10.167	6.460
4- 9	4.750	1.410	10- 3	10.250	6.566
4-10	4.833	1.460	10- 4	10.333	6.673
4-11	4.917	1.510	10- 5	10.417	6.781
5- 0	5.000	1.563	10- 6	10.500	6.891
5- 1	5.083	1.615	10- 7	10.583	7.000
5- 2	5.167	1.669	10- 8	10.667	7.111
5- 3	5.250	1.723	10- 9	10.750	7.223
5- 4	5.333	1.778	10-10	10.833	7.335
5- 5	5.417	1.834	10-11	10.917	7.449
5- 6	5.500	1.891	11- 0	11.000	7.563
5- 7	5.583	1.948	11- 1	11.083	7.677
5- 8	5.667	2.007	11- 2	11.167	7.794
5- 9	5.750	2.066	11- 3	11.250	7.910
5-10	5.833	2.127	11- 4	11.333	8.028
5-11	5.917	2.188	11- 5	11.417	8.147
6- 0	6.000	2.250	11- 6	11.500	8.266
6- 1	6.083	2.313	11- 7	11.583	8.386
6- 2	6.167	2.377	11- 8	11.667	8.507
6- 3	6.250	2.441	11- 9	11.750	8.629
6- 4	6.333	2.507	11-10	11.833	8.752
6- 5	6.417	2.573	11-11	11.917	8.876
6- 6	6.500	2.641	12- 0	12.000	9.000
6- 7	6.583	2.709	12- 1	12.083	9.125
6- 8	6.667	2.778	12- 2	12.167	9.252
6- 9	6.750	2.848	12- 3	12.250	9.379
6-10	6.833	2.918	12- 4	12.333	9.507
6-11	6.917	2.990	12- 5	12.417	9.636
7- 0	7.000	3.063	12- 6	12.500	9.766
7- 1	7.083	3.136	12- 7	12.583	9.896
7- 2	7.167	3.210	12- 8	12.667	10.028
7- 3	7.250	3.285	12- 9	12.750	10.160
7- 4	7.333	3.361	12-10	12.833	10.293
7- 5	7.417	3.438	12-11	12.917	10.428
			13- 0	13.000	10.563

To calculate the area of Fire Doors:

Flush Doors. Multiply width of opening in feet by height of opening in feet.

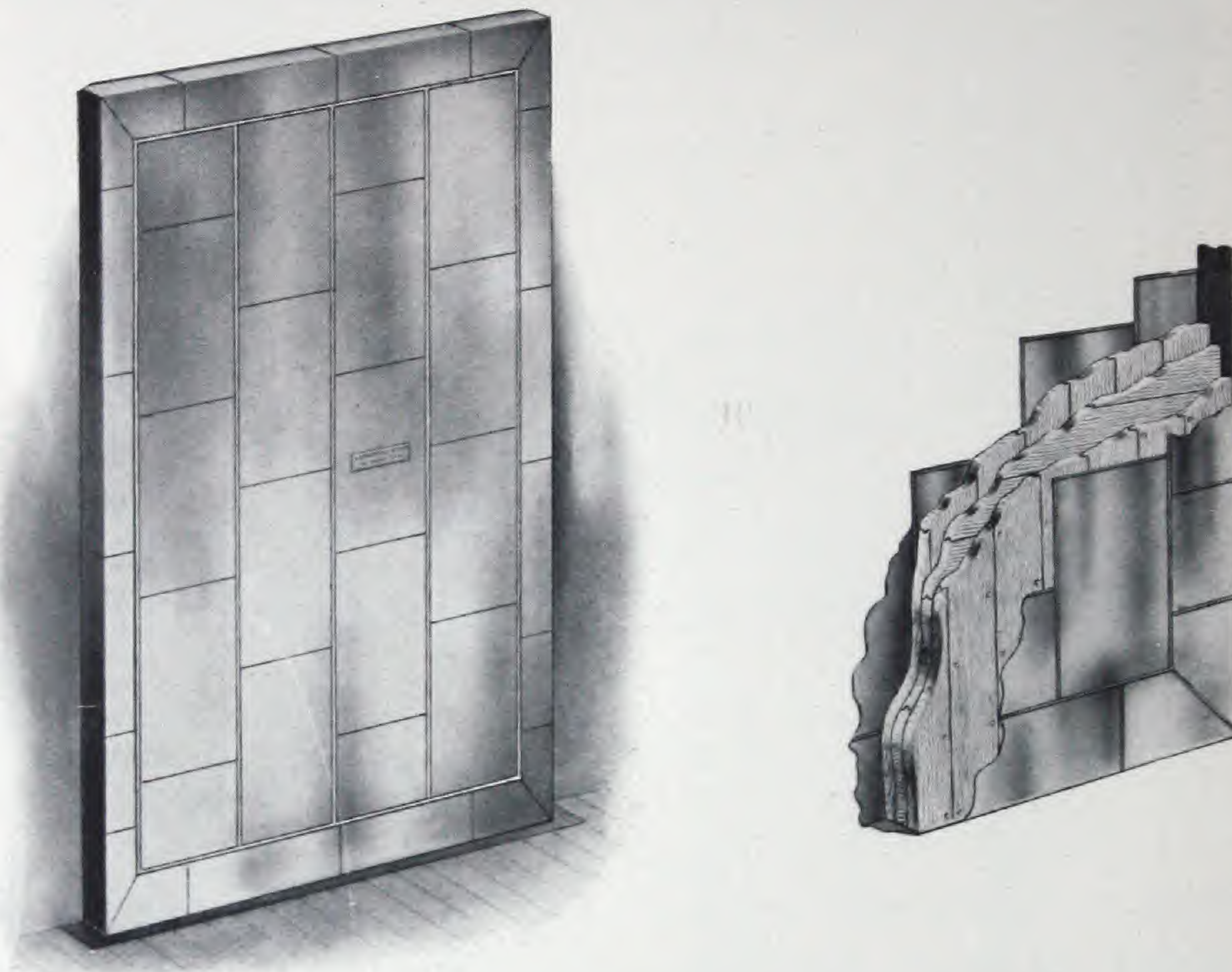
Square Top Lap Doors. Obtain size of door by adding 8 inches to width and 4 inches to height of opening. Multiply width of door in feet by height of door in feet.

Inclined Top Lap Doors. Obtain width of door by adding 8 inches to width of opening, and obtain height of low side of door by adding 4 inches to height of opening. Multiply width of door in feet by height of low side of door in feet and add the quantity opposite the "width of door" in third column of table above.

Decimal equivalents of feet and inches are given in second column of table. The decimal equivalents apply to height as well as width of door.

R-W No. 446 Standard Tin Clad Fire Doors and Shutters

*Approved and Labeled by National Board of Fire Underwriters, After Exhaustive
Tests by the Underwriters Laboratories (Inc.)*



Standard three-ply ($2\frac{5}{8}$ -inch) doors are made of three thicknesses of boards, dressed to $13/16$ inch full, the outside layers vertical and inner layer horizontal; thoroughly fastened together by wrought iron clinched nails not over 8 inches apart, both surfaces of the door smooth; double lock joints in the tin covering as required under the rules of the National Board of Fire Underwriters. Weight, 8 pounds per square foot.

Standard two-ply ($1\frac{3}{4}$ -inch) doors are made of two thicknesses of boards, dressed to $13/16$ inch full, with one layer vertical and one horizontal; thoroughly fastened together by wrought iron clinched nails not over 8 inches apart, surfaces of the door smooth; double lock joints in the tin covering as required under the rules of the National Board of Fire Underwriters, weight 6 pounds per square foot.

Standard Fire Shutters are made in the same manner as two-ply ($1\frac{3}{4}$ -inch) doors and are of the same thickness.

Standard Fire Shutters are used on the outside of buildings to protect window openings.



R-W No. 446 Standard Tin Clad Fire Doors and Shutters

Standard Doors with labels can be furnished for any size opening required but Underwriters recommend that wherever possible the openings should not exceed the following sizes:

Single Sliding Doors for openings 120 square feet in area, with maximum width or height not exceeding 12 feet.

Single Swinging Doors for openings, width not to exceed 6 ft. and height not to exceed 12 ft.

Swinging Doors in Pairs for opening width not exceeding 10 feet and height not exceeding 12 feet.

NOTE: When so desired doors can be furnished with labels of the Factory Mutual Laboratories.

Doors for class A (see page 81) openings in fire walls must be three-ply. Doors or shutters for classes B, C, D and E (see page 81) openings may be either two or three ply. It is usually advisable to consult the local representative of the Underwriters in regard to thickness of doors to be used.

Doors With Glass Panels

Doors for class C situations (see page 81) may be furnished with one or more wire glass panels if desired. Maximum area of each glass not to exceed 2916 square inches, with neither height nor width exceeding 54 inches. Doors for class E situations (see page 81) may be furnished with one or more glass panels not exceeding 720 square inches in area with neither height nor width exceeding 54 inches. Minimum distance from edge of glass panel opening to side of door, 7 inches.

Sectional Doors

The maximum sizes of doors which can be shipped at regular freight rates are as follows: 7 ft. x 22 ft.; 7 ft. 6 in. x 14 ft.; 7 ft. 10 in. x 12 ft. 4 in.; 8 ft. 2 in. x 10 ft. 4 in. Doors larger than the above take special freight rates but where doors are to cover large openings they may be built in sections not exceeding the sizes given above to be bolted together in the field. Generally sectional doors can be kept within the limits of standard freight rates.

Directions for Ordering

STATE: First, width and height of opening.

Second, are doors to be square top or incline top?

Third, state method of mounting doors whether single sliding; sliding doors in pairs, single swing, swinging doors in pairs or vertical doors.

Fourth, state class of opening in building which doors protect; opening in fire wall, opening in vertical shaft, opening in corridor or room partition, opening to exterior fire escape or openings in exterior walls. Opening to exterior fire escapes are of the swinging type only.

Fifth, if glass panels are wanted state number and size of panels.

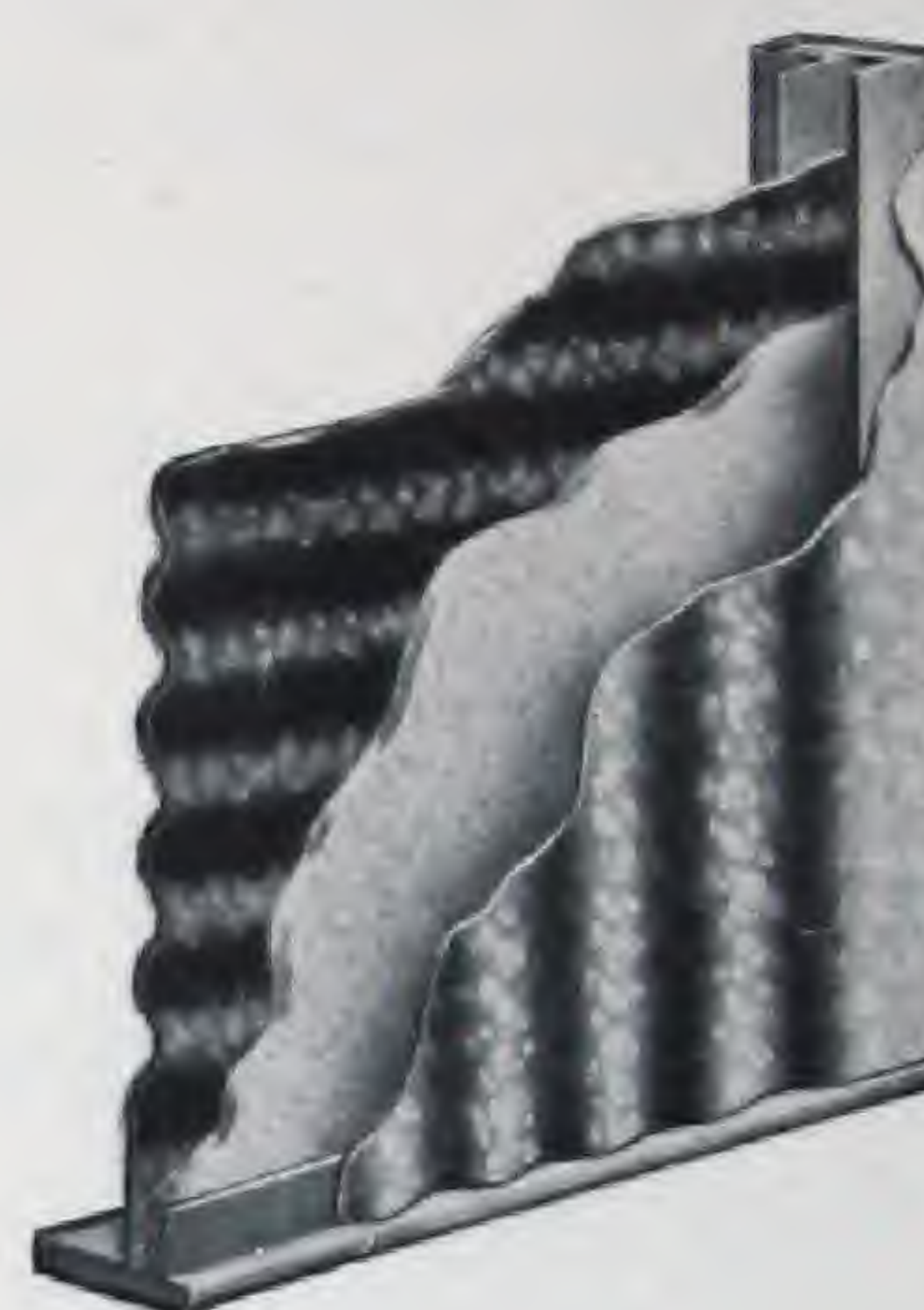
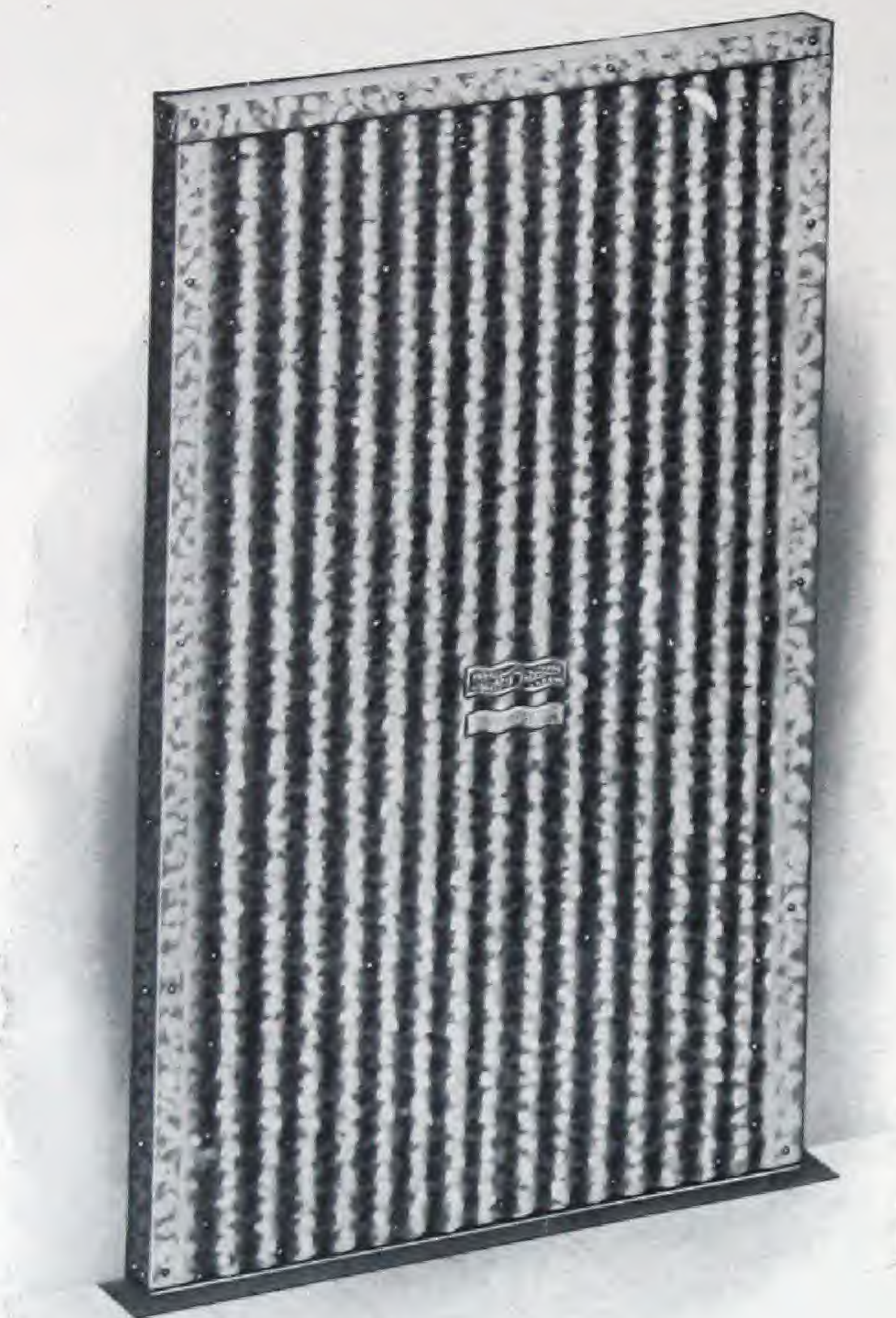
Sixth, if doors are to be built in sections it should be so stated.

List Prices Quoted on Application.



R-W No. 447 "FyeR-Wall" Sheet Metal Doors

Approved and Labeled by National Board of Fire Underwriters, After Exhaustive Tests by the Underwriters Laboratories (Inc.)



"FyeR-Wall" Sheet Metal Doors are especially recommended for fire wall openings because of their high resistance to the direct conduction of heat. The door is capable of withstanding without destruction severe and long continued exposure to fire. The doors are constructed entirely of non-combustible materials.

Inspected by the Underwriters' Laboratories, Inc., under direction of the National Board of Fire Underwriters. Doors bear the Underwriters' label.

These doors show an exceptionally low maintenance cost in comparison with tin clad doors, the core of which is subject to dry rot. The tin covering is also much lighter than the material of which the "FyeR-Wall" door is built and can be much more easily damaged.

The body of the door consists of two thicknesses of galvanized corrugated sheet steel, between which is placed a layer of sheet asbestos. The corrugations on the wall side of the door are horizontal and on the exposed side of the door the corrugations are vertical.

The vertical outside frame members of the door consist of a heavy angle and a light angle. The edge of the corrugated sheet on the exposed side of the door is flattened out and bent around the heavy angle of the frame which presents a neat finished appearance without exposed raw edges of steel. The light angle covers the end of the horizontal corrugated sheets on the wall side of the door. The top and bottom horizontal frame members are heavy bars of steel which are completely covered with galvanized sheet metal.

Allowances are made in the construction of the door so that when exposed to heat, all parts can expand freely without distorting the shape of the door. Therefore, in case of fire, the door will retain its normal position close to the wall, successfully preventing the passage of flames.

Built in either square top or incline top and can be mounted with sliding door hardware or with lap or flush types of swinging door hardware or vertical door hardware.

The construction of the door is exceptionally rigid so that it will maintain its shape under all conditions. The door is especially good in places where subjected to rough usage and where tin clad doors would easily be damaged.

The thickness of the door is 2 $\frac{5}{8}$ ".

Weight about five pounds per square foot.



R-W No. 447 "FyeR-Wall" Sheet Metal Doors

Doors for openings not exceeding the following dimensions are furnished with labels of the National Board of Fire Underwriters. When so required doors can be furnished with labels of the Factory Mutual Laboratories.

Single sliding doors for openings not more than 120 square feet with neither width nor height exceeding 12 feet.

Openings for single swinging doors not exceeding 6 feet in width and 12 feet in height and swinging doors in pairs for opening not exceeding 10 feet in width and 12 feet in height.

Certificates of inspection showing that doors have been built according to standard rules, can be furnished when so required, if asked for at time order is given.

Doors With Glass Panels

Doors for class C situations (see page 81) may be furnished with one or more wire glass panels if desired. Maximum area of each glass not to exceed 2916 square inches with neither height nor width exceeding 54 inches. Doors for class E situations (see page 81) may be furnished with one or more wire glass panels not exceeding 720 square inches in area with neither height nor width exceeding 54 inches.

Sectional Doors

The maximum sizes of doors which can be shipped at regular freight rates are as follows: 7 ft. x 22 ft.; 7 ft. 6 in. x 14 ft.; 7 ft. 10 in. x 12 ft. 4 in.; 8 ft. 2 in. x 10 ft. 4 in.

Doors larger than the above take special freight rates, but where doors are to cover large openings they may be built in sections not exceeding the sizes given above to be bolted together in the field. Generally sectional doors can be kept within the limits of standard freight rates.

Wicket Doors

Wicket doors not exceeding 2 feet 6 inches wide by 7 feet high may be built into the larger doors when so required at an additional price.

Directions for Ordering

STATE: First width and height of opening.

Second, are doors to be square top or incline top? If incline top state whether right or left hand. Doors which slide to the right when opening are right hand doors.

Third, state method of mounting doors whether single sliding; sliding doors in pairs, single swing, swinging doors in pairs or vertical doors.

Fourth, state class of opening in building which doors protect—opening in fire wall, opening in vertical shaft, opening in corridor or room partition, opening to exterior fire escape or openings in exterior walls.

Openings to exterior fire escapes are of the swinging type only.

Fifth, if glass panels are wanted, state number and size of panels.

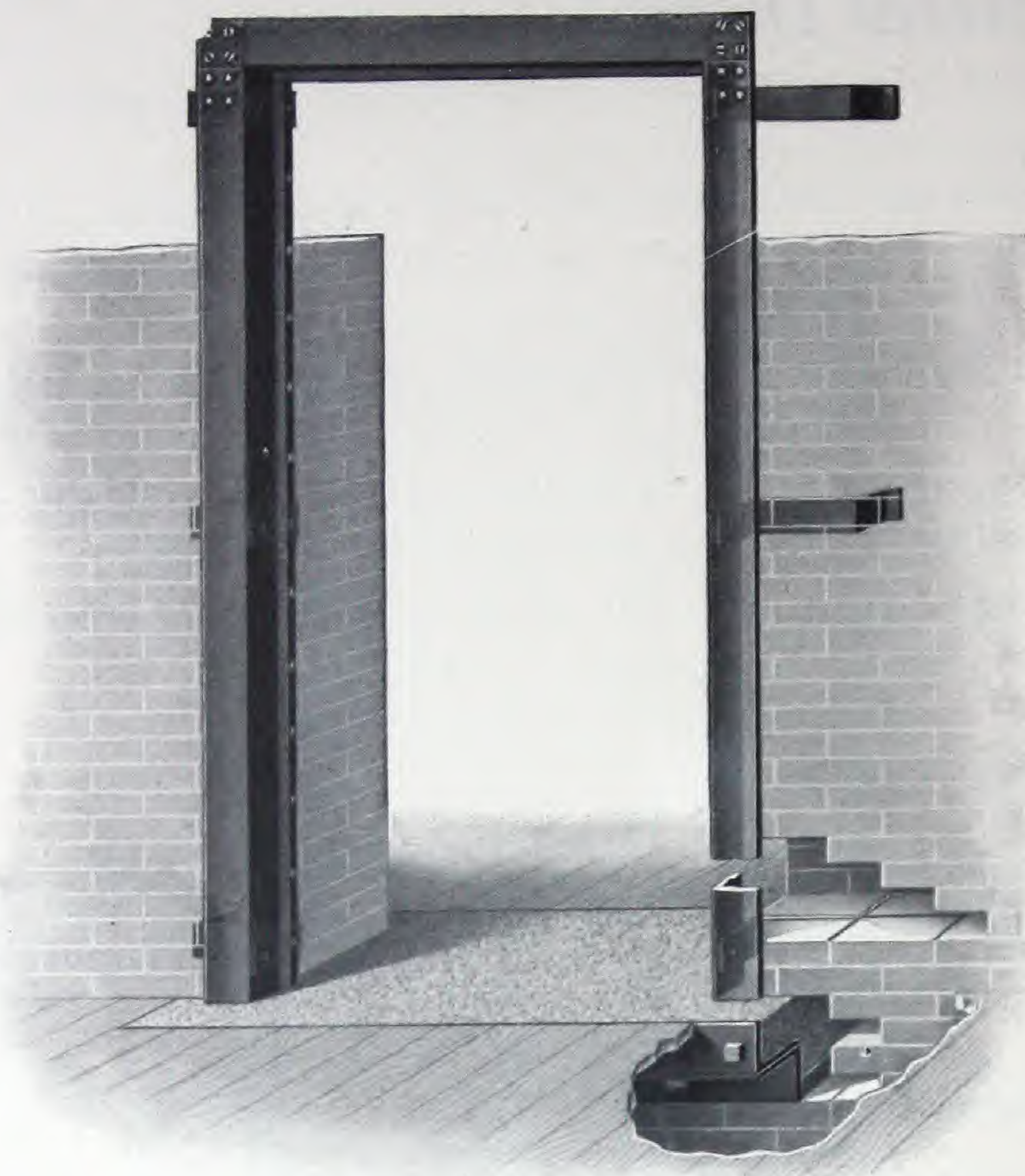
Sixth, if wicket door is wanted send sketch showing size and location in the door.

Seventh, if doors are to be built in sections, it should be so stated.

List Prices Quoted on Application.

R-W No. 386 Angle Iron Door Frame

For Face of the Wall



This frame is built according to the standard as designated by the National Board of Fire Underwriters. This type is best adapted for use in old walls or after wall has been erected, but can be more easily applied as the walls are being built.

Furnished with anchors as illustrated when frame is used on one side of wall only (see also figure A) or with thru bolts when frames are used on both sides of wall, (see figure B). The bottom end of frame extends into sill 2 inches except when used with sill shown in figure 2, page 89.

NOTE: For prices and description of sills see page 89.

List Price

The following list price includes angle iron frame with wall anchors complete for one side of wall as shown, square top opening.

Fixtures Are Not Included in List Price or Weight of Frames.

SIZE OF DOOR OPENING	For 3-ply Tin Clad or "FyeR-Wall" Doors 3½x3½x¼" angle		For 2-ply Tin Clad Doors 3x3x¼" angle		NOTE
	List Price	Weight per opening, lbs.	List Price	Weight per opening, lbs.	
3' wide x 7' or under in height.....	\$18.00	125	\$15.00	110	When fixtures are ordered complete with frames, we drill all holes for attaching same, without extra charge
4' wide x 7' or under in height.....	19.00	131	16.00	115	
5' wide x 7' or under in height.....	20.00	137	17.00	120	
6' wide x 7' or under in height.....	21.00	143	18.00	125	
7' wide x 7' or under in height.....	22.00	149	19.00	130	
8' wide x 7' or under in height.....	23.00	154	20.00	135	
For frames higher than 7' add per foot of opening.....	1.75	14	1.50	12	

Discount.....

Directions for Ordering:—First, send sketch of actual dimensions of opening in wall on old work already constructed. On new work state size of door required and frame will be built accordingly. Second, State whether frame extends into concrete or rests on sill. Third, Is frame to be used on one or both sides of wall? Fourth, If for single or pairs of doors? Fifth, On which side are hinge pintles to be attached, and what type are to be used? If for single doors also state type of latch keeper to be used. Sixth, Thickness of wall. Seventh, Thickness of doors.



Fig. A—With door on one side of wall.



Fig. B—With doors on both sides of wall.



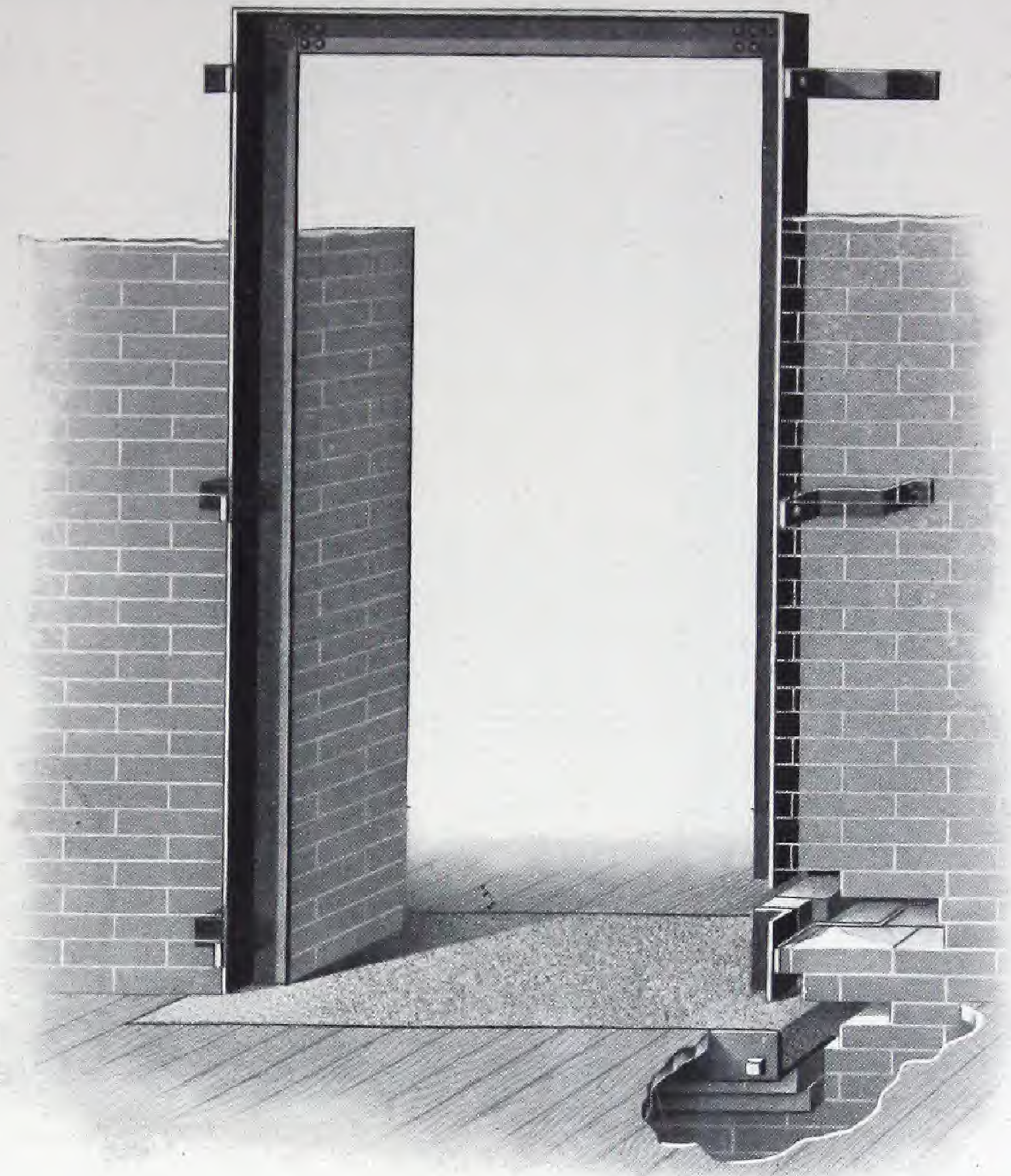
R-W No. 387 Angle Iron Door Frame

Rabbetted Type

This frame is built according to the standard as designated by the National Board of Fire Underwriters. This type is best adapted for building into wall when wall is being erected.

Furnished with anchors as illustrated when frame is used on one side of wall only (see also figure C) or with double ties when frames are used on both sides of wall (see figure D). The bottom end of frame extends into sill 2 inches except when used with sills shown in figure 2 on page 89.

NOTE: For prices and description of sills see page 89.



List Price

The following list price includes angle iron frame with wall anchors complete for one side of wall as shown. Square top opening.

Fixtures Are Not Included in List Price or Weight of Frames.

SIZE OF DOOR OPENINGS	For 3-ply Tin Clad or "FyeR-Wall" 3"x3"x1/4" Angle		For 2-ply Tin Clad Doors 2 1/2"x2 1/2"x1/4" Angle		NOTE
	List Price	Weight per opening, lbs.	List Price	Weight per opening, lbs.	
3' wide x 7' or under in height....	\$15.00	110	\$13.50	95	Fixtures for rabbetted frame are bolted to wall, not to the frame. Special fixture to bolt to frame can be furnished.
4' wide x 7' or under in height....	16.00	115	14.50	100	
5' wide x 7' or under in height....	17.00	120	15.50	105	
6' wide x 7' or under in height....	18.00	125	16.50	110	
7' wide x 7' or under in height....	19.00	130	17.50	115	
8' wide x 7' or under in height....	20.00	135	18.50	120	
For frames higher than 7' add per foot of opening.....	1.50	12	1.25	10	

Discount.....

Directions for Ordering:—First, Send sketch with actual dimensions of opening in wall (i. e. the space to be occupied by the frame) on old work already constructed. On new work state size of door required and frame will be built accordingly. Second, State whether frame extends into concrete or rests on sill. Third, Is frame to be used on one or both sides of wall. Fourth, If for single or pairs of doors. Fifth, On which side are hinge pintles to be attached and what type are to be used? If for single doors also state type of latch keeper to be used. Sixth, Thickness of wall. Seventh, Thickness of doors.



Fig. C—With door on one side of wall.



Fig. D—With doors on both sides of wall.

R-W No. 388 Channel Frame



Channel frames are especially adapted for use with tile or terra cotta walls and may be built to extend from floor to ceiling when walls are not substantial enough to hold the frames securely in place. The width of the channel is generally made 1 inch wider than the thickness of the tile or terra cotta. The doors can be attached to one or both sides of the frame. The bottom end of frame extends into sill 2 inches except when used with sill shown in figure 2 on page 89.

List Price

The following list price includes channel frames with wall anchors as shown in the illustration. When channels extend above the top of the opening to ceiling special prices will be quoted if distance from floor to ceiling is given. Fixtures are not included in list price or weight of frames. Prices are based on standard light section channels.

Size of Door Openings	5" Channels		6" Channels		7" Channels		8" Channels		9" Channels	
	List Price	Weight lbs.	List Price	Weight lbs.	List Price	Weight lbs.	List Price	Weight lbs.	List Price	Weight lbs.
3' wide x 7' or under in height.....	\$19.00	160	\$22.00	190	\$25.60	220	\$28.50	245	\$32.30	280
4' wide x 7' or under in height.....	20.00	168	23.00	210	26.80	232	29.90	258	33.90	295
5' wide x 7' or under in height.....	21.00	176	24.00	220	28.00	244	31.30	271	35.50	310
6' wide x 7' or under in height.....	22.00	184	25.00	230	29.20	256	32.70	284	37.10	325
7' wide x 7' or under in height.....	23.00	192	26.00	240	30.40	268	34.10	297	38.70	340
8' wide x 7' or under in height.....	24.00	200	27.00	250	31.60	280	35.50	310	40.30	355
For frames higher than 7' add per foot of opening.....	1.70	15	2.00	18	2.40	22	2.80	25	3.20	30

Directions for Ordering:—First, Send sketch with actual dimensions of opening in wall on old work already constructed. On new work state size of door required and frame will be built accordingly.

Second, State whether frame extends into concrete or rests on sill.

Third, Will doors be used on one or more sides of wall?

Fourth, If for single or pairs of doors?

Fifth, On which side are hinge pintles to be attached and what type are to be used? If for single doors also state type of latch keeper to be used.

Sixth, Width of channel required.

Seventh, Thickness of doors.



Fig. E—With door on one side of wall.



Fig. F—With doors on both sides of wall.



R-W Angle Iron Sills



FIG. 1 ANGLES FOR FLUSH SILL



FIG. 2 ANGLES AND STEEL PLATE SILL



FIG. 3 ANGLES FOR CORBELED SILL



FIG. 4 Z BARS FOR SILLS

All of the sills illustrated are manufactured according to the standard specifications and rules of the National Board of Fire Underwriters.

Sills as shown in Figs. 1 and 3 are a combination of angle irons and concrete. This makes a very substantial threshold, and when the concrete is worn it can be replaced at a very small expense.

Sills as shown in Fig. 2 is the same as Fig. 1 with the addition of a steel plate on top of the concrete. Plate is always assembled to angle irons on job unless otherwise specified.

Sill as shown in Fig. 4 is a combination of Z bars and concrete. The same lasting qualities as mentioned for sills as shown in Figs. 1 and 3.

State thickness of walls so we can send bolts of the proper length or plate of the proper width, as same are included in the price of the sills.

List Price

Size of Opening Feet	Fig. 1 3½x5x¾-inch angle for flush sill with bolts	*Fig. 2 3½x5x¾-inch angle and ¼-inch steel plate for sill with bolts	Fig. 3 3½x6x¾-inch angle for corbeled sill with bolts	Fig. 4 4x4x¾-inch Z bars for sills with bolts
3	\$ 8.00	\$14.50	\$ 9.00	\$14.50
4	10.00	18.00	11.00	18.00
5	12.00	21.50	13.00	21.50
6	14.00	25.00	15.00	25.00
7	16.00	28.50	17.00	28.50
8	18.00	32.00	19.00	32.00

Discount.....

*Plates included in List Price up to 13-inch wall. Over 13 inches price will be quoted on application.

Directions for Ordering

First, state exact width of opening (and angle iron or Z bars will be furnished long enough to extend 6 inches into the wall on either side).

Second, state thickness of wall.

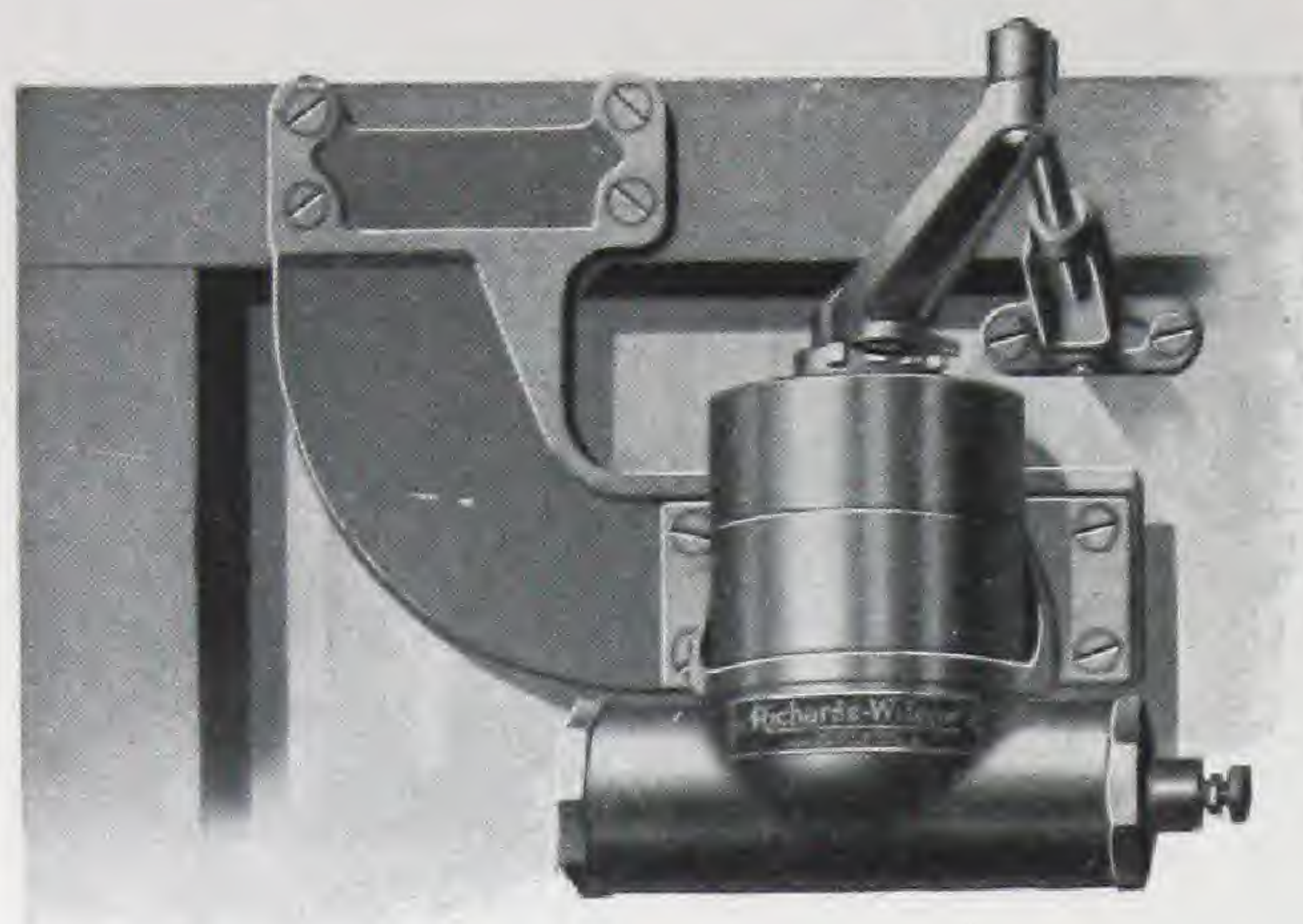
Third, on Figure 2 sills state if plate is desired the full length of the angle irons (as required by the rules of the Board of Underwriters) or the width of the opening. Also state thickness of wall, so plate of correct width can be furnished.

Fourth, state if standard guide rollers for sliding doors are to be used with sills shown in Figures 1 and 2.

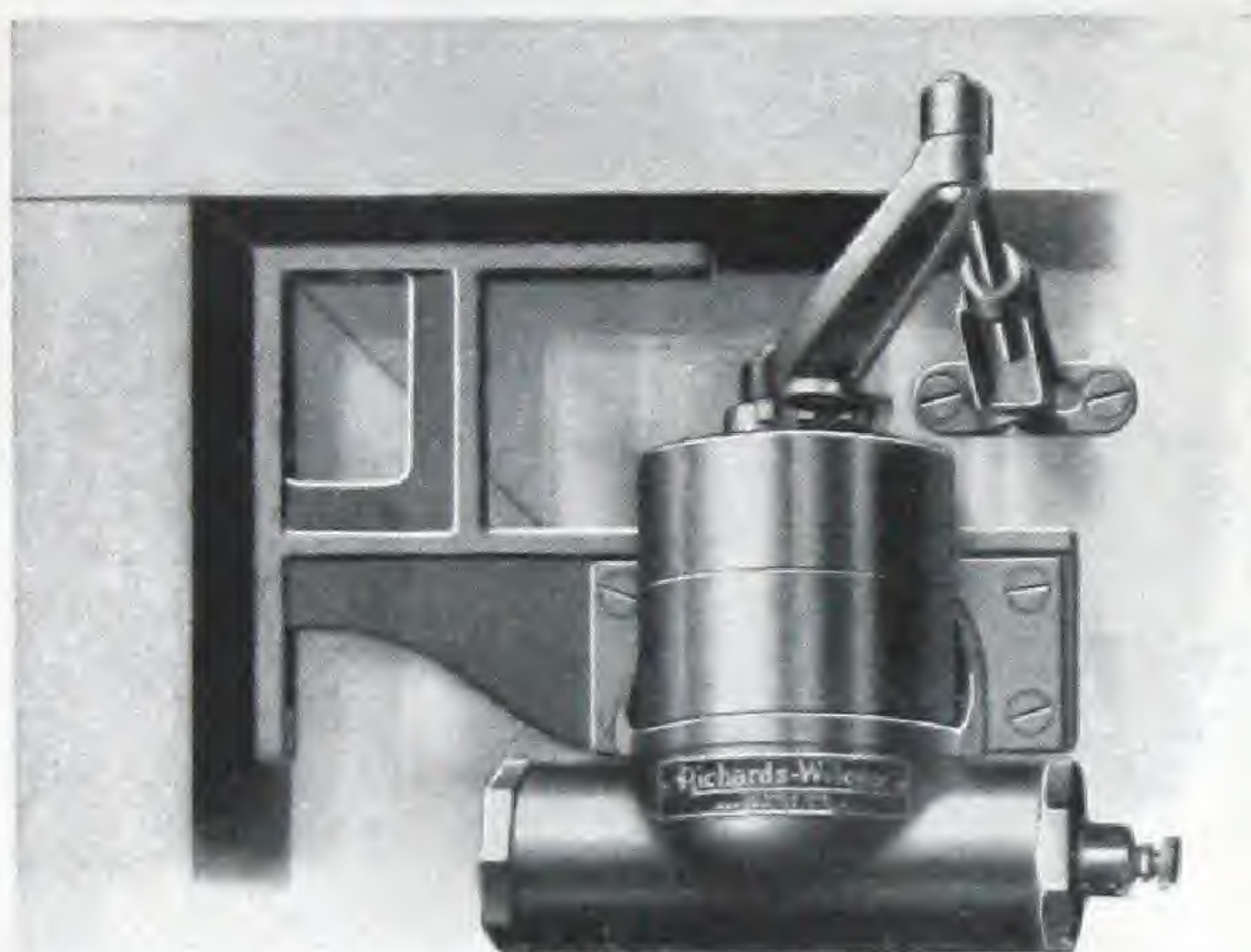


R-W No. 643 Door Closer and Check

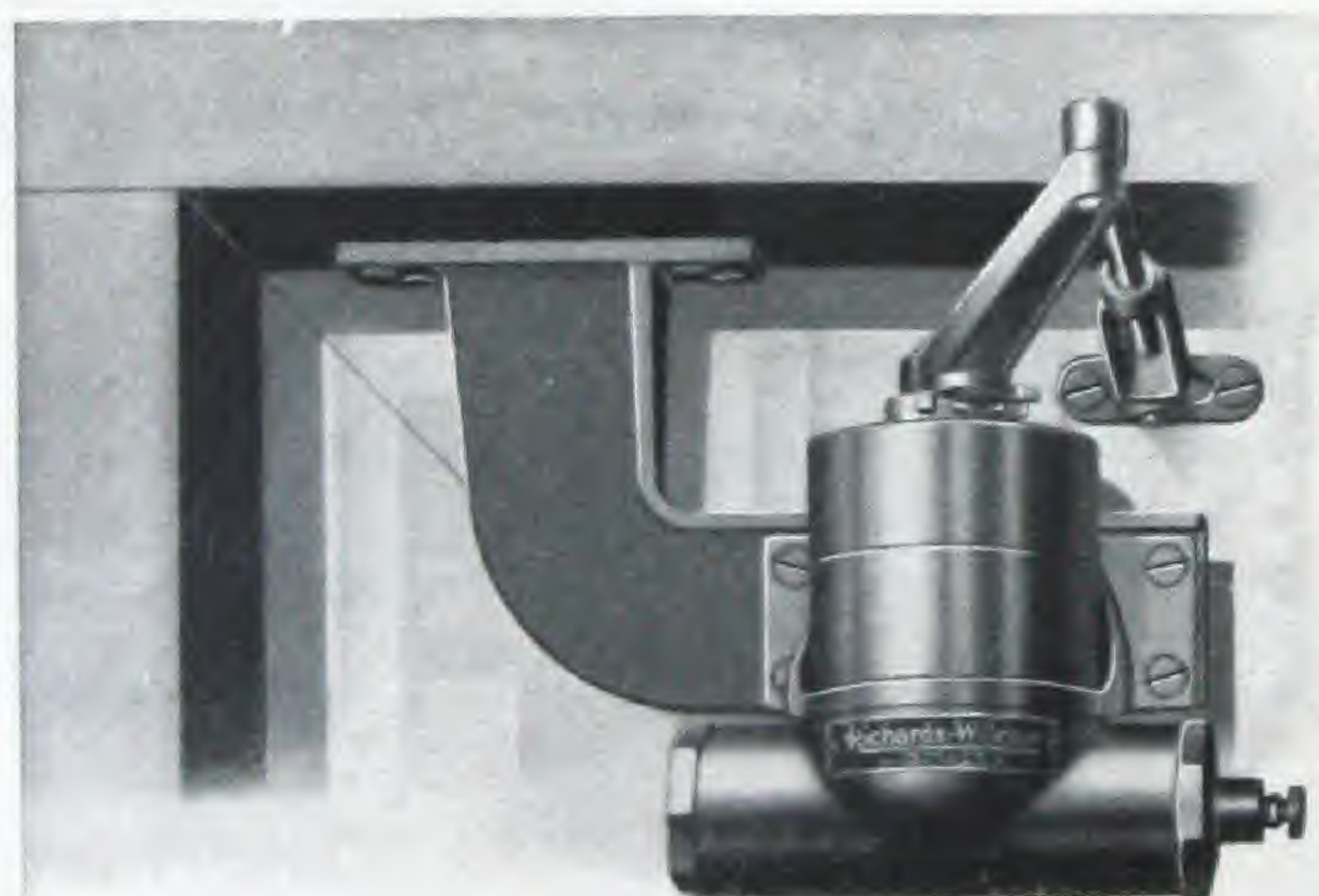
Approved by the National Board of Fire Underwriters



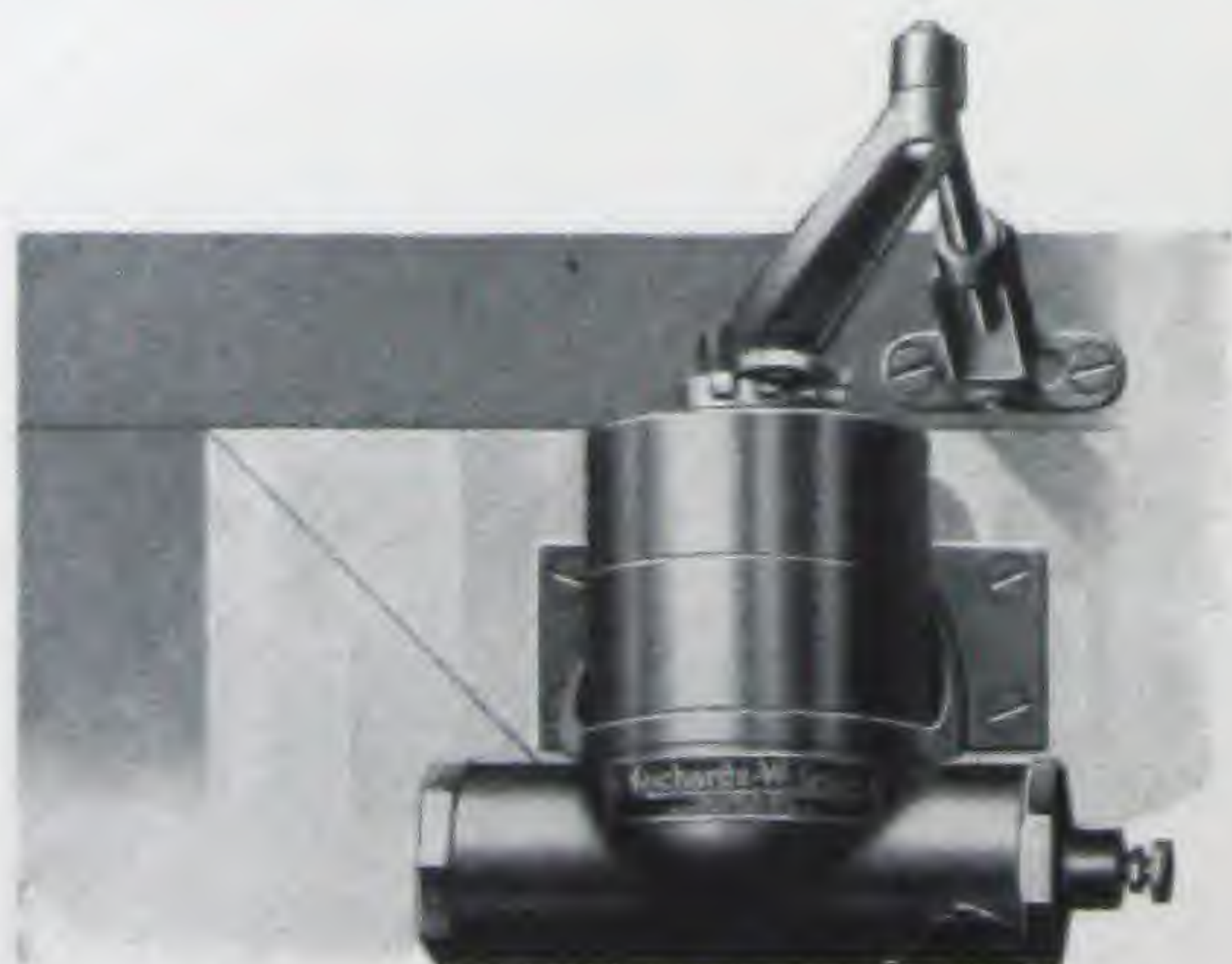
Attachment by Flush Bracket.



Attachment by Corner Bracket.



Attachment by Soffit Bracket.



Standard Attachment.

General Construction:

The R-W Door Closer and Check employs the old, time tried crank and pitman, checking mechanism improved and simplified. In R-W Checks all working parts used in the checking cylinder are made of steel drop forgings.

The Spring:

Broken Springs.—It is impossible to over-wind the spring in the R-W Check. While the tension of the spring can be adjusted to suit conditions by the pawl and tooth-dog, the limited number of teeth on the tooth-dog makes over-winding impossible. The spring power is a unit in itself, which can be removed if desired without taking check off the door.

Checking Mechanism:

The checking mechanism is entirely separate from the operating mechanism. The spindle stuffing box is above the liquid level. The liquid is a non-freezing oil in which the main working parts are emersed, has high lubricating qualities and contains no alcohol.

Reversible Feature:

The R-W Check can be changed from right to left by simply swinging the arm from one side to the other, the pawl that engages the toothed dog being so placed as to engage on either side. These features make the Richards-Wilcox the only truly reversible check on the market.

General Features:

No special wrenches or tools are required in assembling or winding up the spring.

Size of Door Closer and Check Required

Width of Door	Doors up to 7' high		Doors over 7' high	
	2 ply or sheet metal	3 ply	2 ply or sheet metal	3 ply
2' 6"	No. 2	No. 2	No. 3	No. 3
3' 0"	No. 2	No. 3	No. 3	No. 4
3' 6"	No. 3	No. 4	No. 4	No. 5
4' 0"	No. 4	No. 5	No. 5	No. 6

On higher doors use next larger size.

List Price on No. 643 Door Closer and Check

Size	Weight each	List Price each	Size	Weight each	List Price each
No. 2	7½ lbs.	\$4.25	No. 5	15 lbs.	\$8.00
No. 3	10 lbs.	\$5.00	No. 6	18 lbs.	10.00
No. 4	12 lbs.	\$6.00			

Discount.....

The above calculations are based on Standard doors. Extra heavy doors or doors subject to strong drafts require a check one size larger than specified. Checks are furnished regularly in gold bronze. Checks furnished in silver bronze or ivory black at the same prices as gold bronze. Prices for special finishes on application.

BRACKETS

Prices of Different Styles of Brackets in Gold Bronze, Ivory Black or Silver Finish

Style of Bracket	No. 1 Size	No. 2 Size	No. 3 Size	No. 4 Size	No. 5 Size	No. 6 Size
Soffit Bracket.....	.15	.20	.30	.35	.40	.45
Flush Bracket.....	.30	.30	.35	.50	.55	.55
Corner Bracket.....	.50	.60	.65	.70	.75	.85

Discount.....



R-W No. 97 Approved Fusible Link for Fire Doors

Each Link Stamped 160 Degrees.



Full Size Cut No. 97.

This link is included in list of fire door hardware Approved and Labeled by National Board of Fire Underwriters after exhaustive test by the Underwriters' Laboratories (Inc.)

Full description of this link is given on pages 9 and 10.

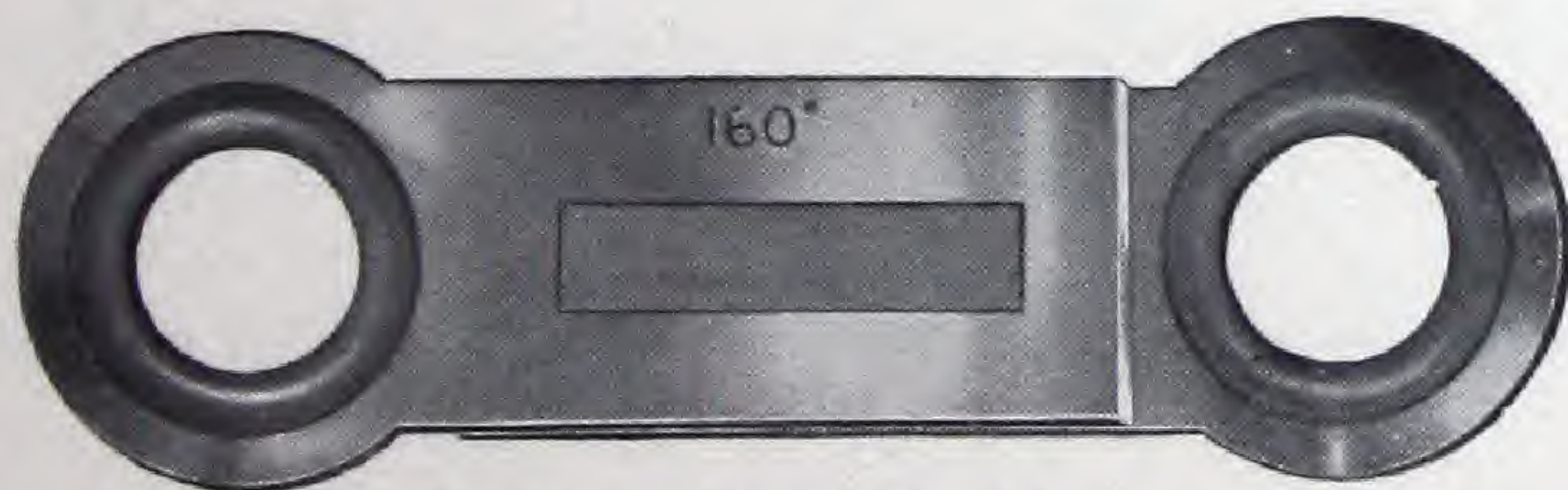
List Price

No. 97 Approved and Labeled Link, each.....	\$.50
Lots of 25, each .....	.40
Lots of 50, each .....	.30
Lots of 100, each .....	.25
Lots of 500, each .....	.24
Lots of 1,000, each .....	.22
Lots of 2,000, each .....	.20

Packed regularly 100 in a box.

Discount.....

R-W Nos. 96 and 96 1-2 Fusible Link for Fire Doors



Full Size Cut No. 96.



Full Size Cut No. 96 1/2.

These fusible links are used for fire door fixtures and are adapted for use on all doors and windows, which are constructed to close automatically by heat. These links melt at 160 degrees Fahrenheit.

List Price

No. 96 Fusible Link, each.....	\$.30
No. 96 1/2 Fusible Link, each.....	.20

Discount.....

No. 107

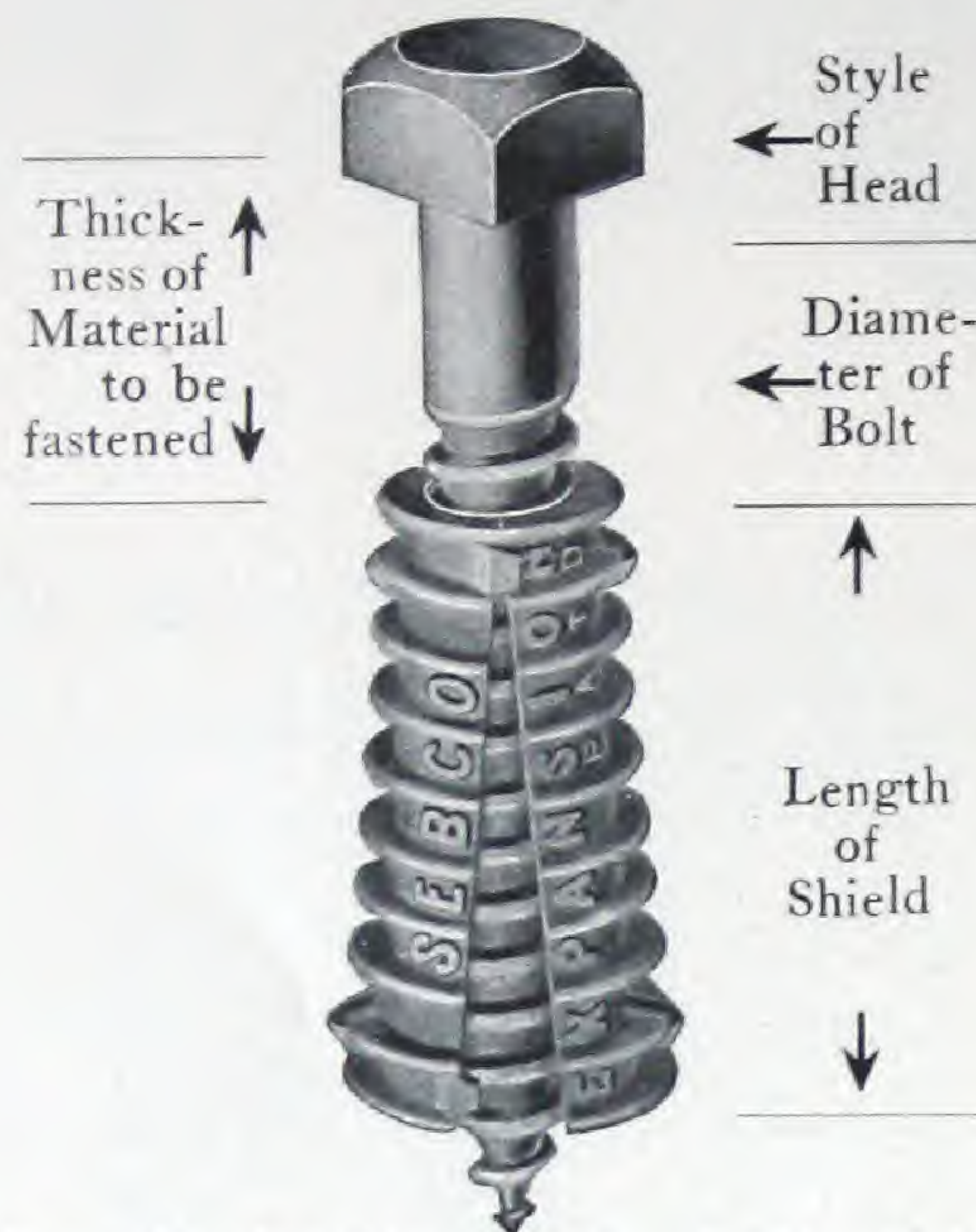
New "Diamond N" Expansion Shield



New "Diamond N" Expansion Bolt



Note—For List Price see table below. Unless otherwise specified on order Long Standard Shields only will be sent.



The illustration given here shows how to determine the measurements of the lag screw type with shield.

No. W-206

"Sebco" Expansion Shields



"Sebco" Expansion Bolts



Note—Unless otherwise specified on order Long Standard Shields only, will be sent.

LIST PRICE—NO. 107 or No. W-206
Shields Only, per 100—Two-Part Malleable—Based on Diameter of Screw

Diameter of Lag Screw.....	$\frac{1}{4}$ inch	$\frac{5}{16}$ inch	$\frac{3}{8}$ inch	$\frac{7}{16}$ inch	$\frac{1}{2}$ inch	$\frac{5}{8}$ inch	$\frac{3}{4}$ inch	$\frac{7}{8}$ inch	1 inch
Price, per 100.....	\$15.00	\$18.00	\$25.00	\$32.00	\$38.00	\$45.00	\$65.00	\$95.00	110.00
Length of Shield—Long Standard.....	1½	2	2¾	3	3½	3½	3½	5	5
Length of Shield—Short Standard.....	..	1½	2	2	2	2	2	..	..
Outside Diameter of Shield.....	$\frac{7}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{11}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	1¼	1½
Diameter of drill required for No.107...	$\frac{1}{2}$	$\frac{3}{8}$	$\frac{5}{8}$	$\frac{11}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1½	1¾	1½
Diameter of drill required for No. W206	$\frac{7}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{11}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	1¼	1¾

Discount.....

Note—In ordering state whether Diamond N or Sebco Shields are wanted, also specify by number, stating size and if Long or Short Standard are desired.

Instructions for Using

No. 107 and No. 206 Expansion Shields and Bolts

Drill a hole the same size as the given outside diameter of the shield to be used, place the shield in the wall and set well back.

Run the screw through the material or article to be fastened, then into the inserted Shield and fasten tight.

To Use No. 107½ and No. 206½ Screw Anchors

Drill a hole the same size as given outside diameter of Anchor to be used.

Insert the Anchor flush with the surface; put the Screw through the article or material to be attached, then on into the Anchor and fasten tight. The Anchor is made of soft lead composition; the Screw when forced through the Anchor cuts its own thread.



SEE THAT BULB, PATENTED



No. 107 $\frac{1}{2}$ Diamond Screw Anchors

Note—For List Price, See Table Below.



No. W-206 $\frac{1}{2}$ "Sebco" Screw Anchors



Screw anchors are made of Composition Metal in one piece, and are so constructed that the screw cuts its own thread. This enables its use with any wood, machine or special screw, its efficiency with all styles being equal.

Will not break, chip, mark or deface the finest marble or tile. The Lead Composition is non-rusting. Adapted especially for plumbing and electrical work on tile, marble or stone.

List Price—No. 107 $\frac{1}{2}$ or No. W-206 $\frac{1}{2}$

(Screws not Included in Following List Price)

Diameter of Screw in Inches	Length of Anchor	Diameter of Screw by Number	Outside Diameter Size Drill to use	List per 100	Diameter of Screw in Inches	Length of Anchor	Diameter of Screw by Number	Outside Diameter Size Drill to use	List per 100
$\frac{1}{8}$ "	$\frac{1}{2}$ "	No. 5-6-7	$\frac{1}{4}$ "	\$ 4.40	$\frac{5}{16}$ "	$\frac{3}{4}$ "	No. 15-16-17-18	$\frac{7}{16}$ "	\$ 6.25
$\frac{1}{8}$ "	$\frac{5}{8}$ "	No. 5-6-7	$\frac{1}{4}$ "	4.40	$\frac{5}{16}$ "	1"	No. 15-16-17-18	$\frac{7}{16}$ "	6.25
$\frac{1}{8}$ "	$\frac{3}{4}$ "	No. 5-6-7	$\frac{1}{4}$ "	4.40	$\frac{5}{16}$ "	$1\frac{3}{8}$ "	No. 15-16-17-18	$\frac{1}{2}$ "	10.00
$\frac{1}{8}$ "	1"	No. 5-6-7	$\frac{1}{4}$ "	4.40	$\frac{5}{16}$ "	$1\frac{1}{2}$ "	No. 15-16-17-18	$\frac{7}{16}$ "	10.00
$\frac{3}{16}$ "	$\frac{1}{2}$ "	No. 8-9-10-11	$\frac{1}{4}$ "	5.00	$\frac{5}{16}$ "	2"	No. 15-16-17-18	$\frac{7}{16}$ "	13.00
$\frac{3}{16}$ "	$\frac{3}{4}$ "	No. 8-9-10-11	$\frac{5}{16}$ "	5.00	$\frac{3}{8}$ "	1"	No. 20-22-24	$\frac{9}{16}$ "	13.00
$\frac{3}{16}$ "	1" Light	No. 8-9-10-11	$\frac{5}{16}$ "	5.00	$\frac{3}{8}$ "	$1\frac{1}{4}$ "	No. 20-22-24	$\frac{9}{16}$ "	15.00
$\frac{3}{16}$ "	1" Heavy	No. 8-9-10-11	$\frac{3}{8}$ "	5.60	$\frac{3}{8}$ "	2"	No. 20-22-24	$\frac{9}{16}$ "	15.00
$\frac{3}{16}$ "	$1\frac{5}{8}$ "	No. 8-9-10-11	$\frac{5}{8}$ "	6.25	$\frac{1}{2}$ "	2"	No. 26-28-30	$\frac{3}{4}$ "	25.00
$\frac{1}{4}$ "	$\frac{1}{2}$ "	No. 12-13-14	$\frac{3}{8}$ "	5.60	$\frac{5}{8}$ "	2"	$\frac{5}{8}$ " Lag Screw	$\frac{7}{8}$ "	30.00
$\frac{1}{4}$ "	$\frac{3}{4}$ "	No. 12-13-14	$\frac{3}{8}$ "	5.60	$\frac{5}{8}$ "	$3\frac{1}{2}$ "	$\frac{5}{8}$ " Lag Screw	$\frac{7}{8}$ "	50.00
$\frac{1}{4}$ "	1"	No. 12-13-14	$\frac{3}{8}$ "	5.60					
$\frac{1}{4}$ "	$1\frac{1}{2}$ "	No. 12-13-14	$\frac{3}{8}$ "	8.00					
$\frac{1}{4}$ "	2"	No. 12-13-14	$\frac{3}{8}$ "	10.00					
$\frac{1}{4}$ "	$2\frac{1}{2}$ "	No. 12-13-14	$\frac{3}{8}$ "	12.00					

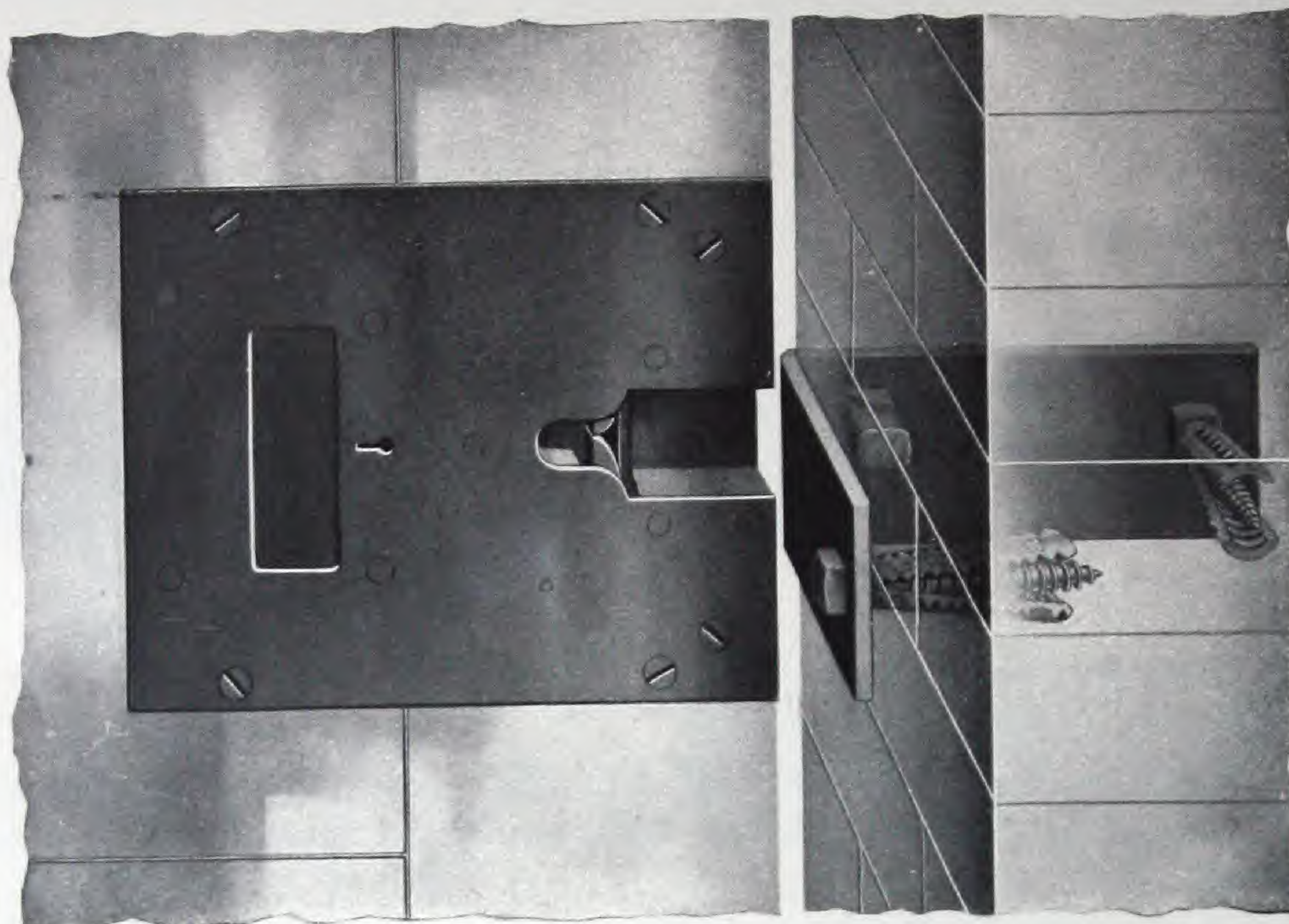
Put up in wooden boxes 100 to a box.
Light pattern $\frac{3}{16}$ " x 1" furnished unless
otherwise specified.

Note—All list prices given in previous catalogues are void. In ordering, always specify by number and give both dimensions.

Note—Drills for above screw anchors shown on Page 95.

R-W No. 515 Sliding Door Lock

For Fire Doors, Warehouse and Factory Doors That Lap the Wall.



Made of steel with malleable jaws.

Designed especially for doors that lap wall up to 4 inches.

Regular for 25/8" doors. Can furnish for 13/4" doors on special order.

Made flush with the door on both sides and can be operated from both outside and inside.

The act of closing the door latches it, and to unlatch it simply press back the hand-hole or flush pull cover with the fingers. This is a valuable feature, for with other sliding door locks it is necessary to use a key not only to unlock the door but also each time it is unlatched. The key is used only to lock or unlock the door. To latch or unlatch no key is necessary, the action being automatic with the opening or closing of the door.

The use of the blind screw studs on the outside makes lock practically burglar proof. They are reversible, for either right or left-hand doors, single or double.

This lock serves as a lock, latch, and door pull combined. The door, not the lock, receives the shock when door strikes jamb. The strike or keeper is especially adapted for attachment to brick, concrete or masonry.

Size of plate, on wall side, 7 inches high by 83/4 inches wide.

Packed one in metal-edge box, complete with screws, keeper and two keys. Keys are numbered for twelve changes to each dozen locks.

Weight 84 pounds per dozen.

List Price

No. 515 Lock, regular finish, dead black, per dozen\$48.00

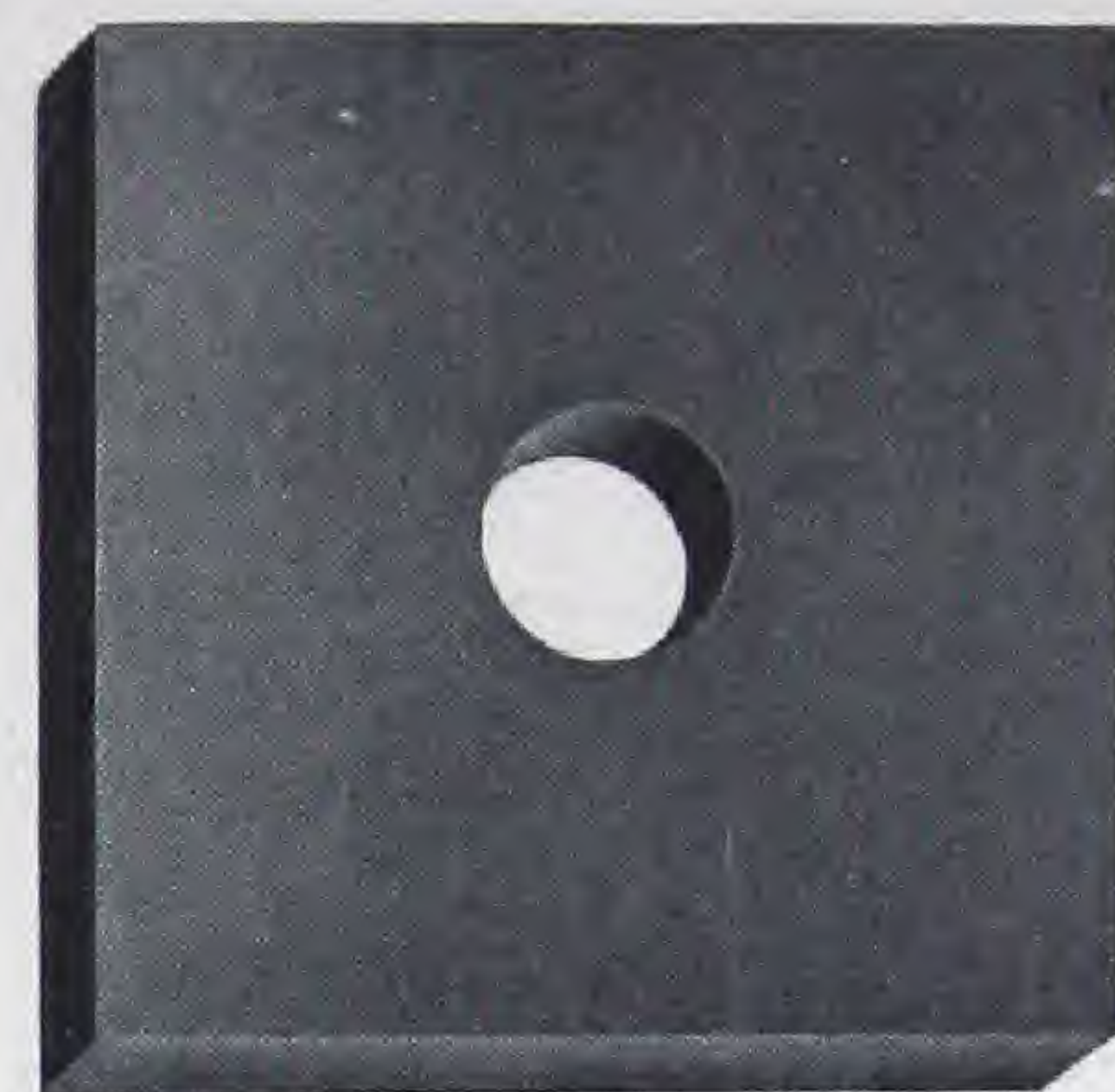
Discount.....



R-W No. 366 Heavy Square Steel Washer

List Price

Diameter of Bolt	Diameter Hole in Inches	Size—Inches	Thickness Inches	Price per 100
$\frac{1}{2}$	$\frac{9}{16}$	$2\frac{1}{4} \times 2\frac{1}{4}$	$\frac{3}{16}$	\$3.50
$\frac{5}{8}$	$\frac{11}{16}$	3 x 3	$\frac{1}{4}$	4.50
$\frac{3}{4}$	$\frac{13}{16}$	$3\frac{1}{2} \times 3\frac{1}{2}$	$\frac{3}{8}$	5.00



NOTE: Always specify size of bolt. Packed in bulk.

Discount.....

R-W No. 186 Star Drills for Drilling Brick, Concrete and Stone

Self centering cutting edge. Highest grade crucible tool steel. Upset and forged to allow proper degree of clearance on the blades to prevent choking. Every drill guaranteed.



List Price Per Dozen

Length	DIAMETER OF CUTTING EDGE												
	$\frac{1}{8}$ -inch	$\frac{1}{4}$ -inch	$\frac{3}{8}$ -inch	$\frac{1}{2}$ -inch	$\frac{5}{8}$ -inch	$\frac{3}{4}$ -inch	$\frac{7}{8}$ -inch	1-inch	1 $\frac{1}{8}$ -inch	1 $\frac{1}{4}$ -inch	1 $\frac{3}{8}$ -inch	1 $\frac{1}{2}$ -inch	
12	\$ 8.50	\$ 8.50	\$ 8.50	\$ 9.00	\$10.00	\$12.00	\$14.00	\$16.00	\$18.00	\$20.00	\$22.00	\$23.00	\$24.00
18	10.50	10.50	10.50	11.50	12.50	15.00	\$17.50	20.00	22.50	25.00	27.50	28.25	30.00



R-W No. 59 Stay Roller

Made extra high to suit doors up to ten feet wide hung on incline track. Suitable for use with fire doors when stay roller can be attached to concrete floors or where a sub-standard stay roller is acceptable. Wheels, gray iron $3\frac{1}{4}$ " in diameter. Steel frame $2\frac{1}{4}$ " wide, $\frac{3}{16}$ " thick and $7\frac{1}{2}$ " high. Finish, japan. Packed in bulk. Weight, per dozen, 50 pounds.

List Price

No. 59 Stay Rollers, per dozen.....\$8.00

Discount.....

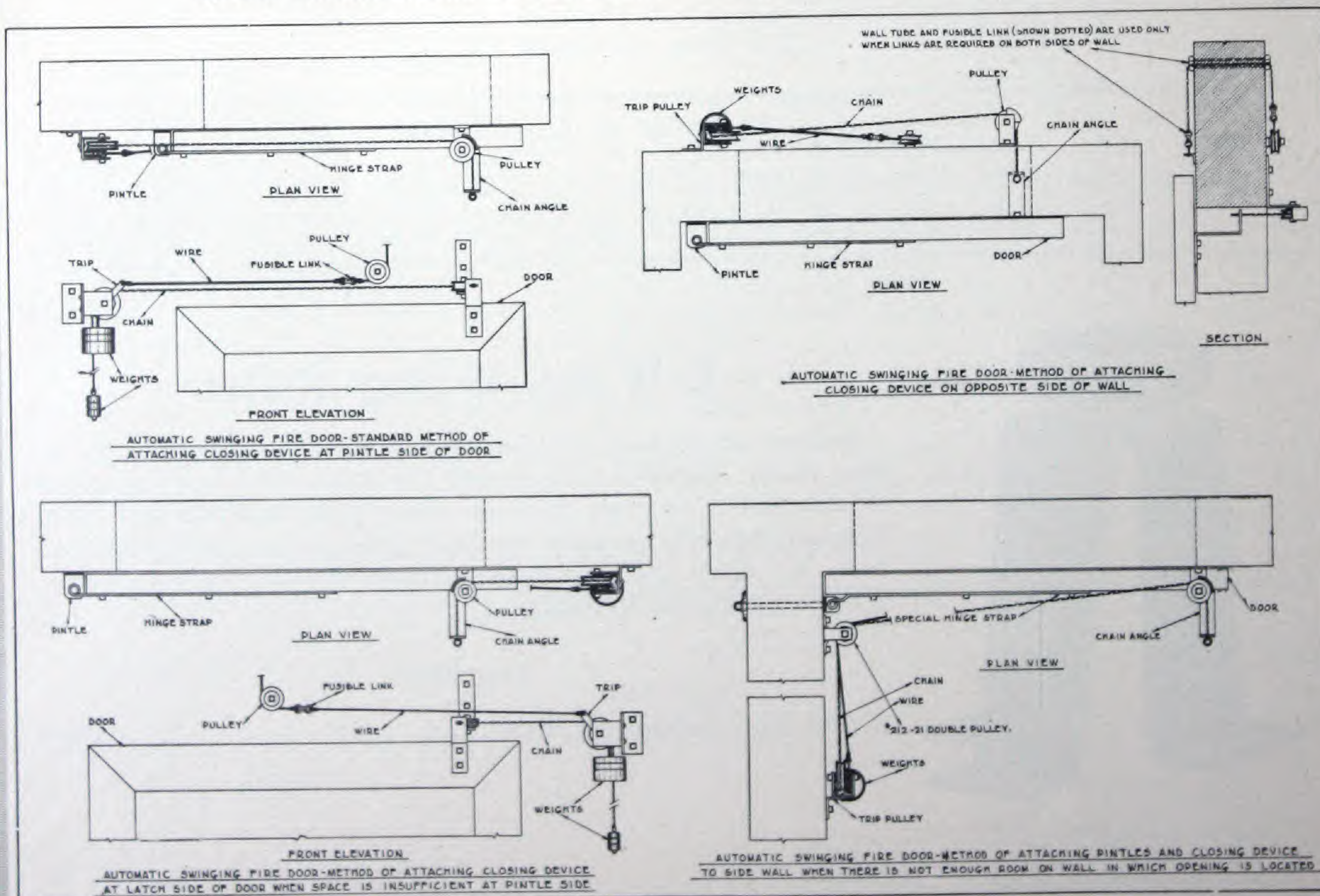
PRICE LIST OF MACHINE BOLTS

Square Heads and Square Nuts
Price Per Hundred

Length Inches	Diameter 1/2"	Diameter 5/8"	Diameter 3/4"	Length Inches	Diameter 5/8"	Diameter 3/4"
1 1/2	\$ 3.60	—	—	16	\$16.22	\$23.65
2	3.86	—	—	17	16.98	24.75
3	4.38	—	—	18	17.74	25.85
4	4.90	—	—	19	18.50	26.95
5	5.42	—	—	20	19.26	28.05
6	5.94	\$ 8.62	\$12.65	21	—	29.15
7	6.46	9.38	12.75	22	—	30.25
8	6.98	10.14	14.85	23	—	31.35
9	7.50	10.90	15.95	24	—	32.45
10	8.02	11.66	17.05	25	—	33.55
11	8.54	12.42	18.15	26	—	34.65
12	9.06	13.18	19.25	27	—	35.75
13	9.58	13.94	20.35	28	—	36.85
14	10.10	14.70	21.45	29	—	37.95
15	10.62	15.46	22.55	30	—	39.05

Discount.....

Special Arrangements of Automatic Closing Devices for Swinging Doors.







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CCA